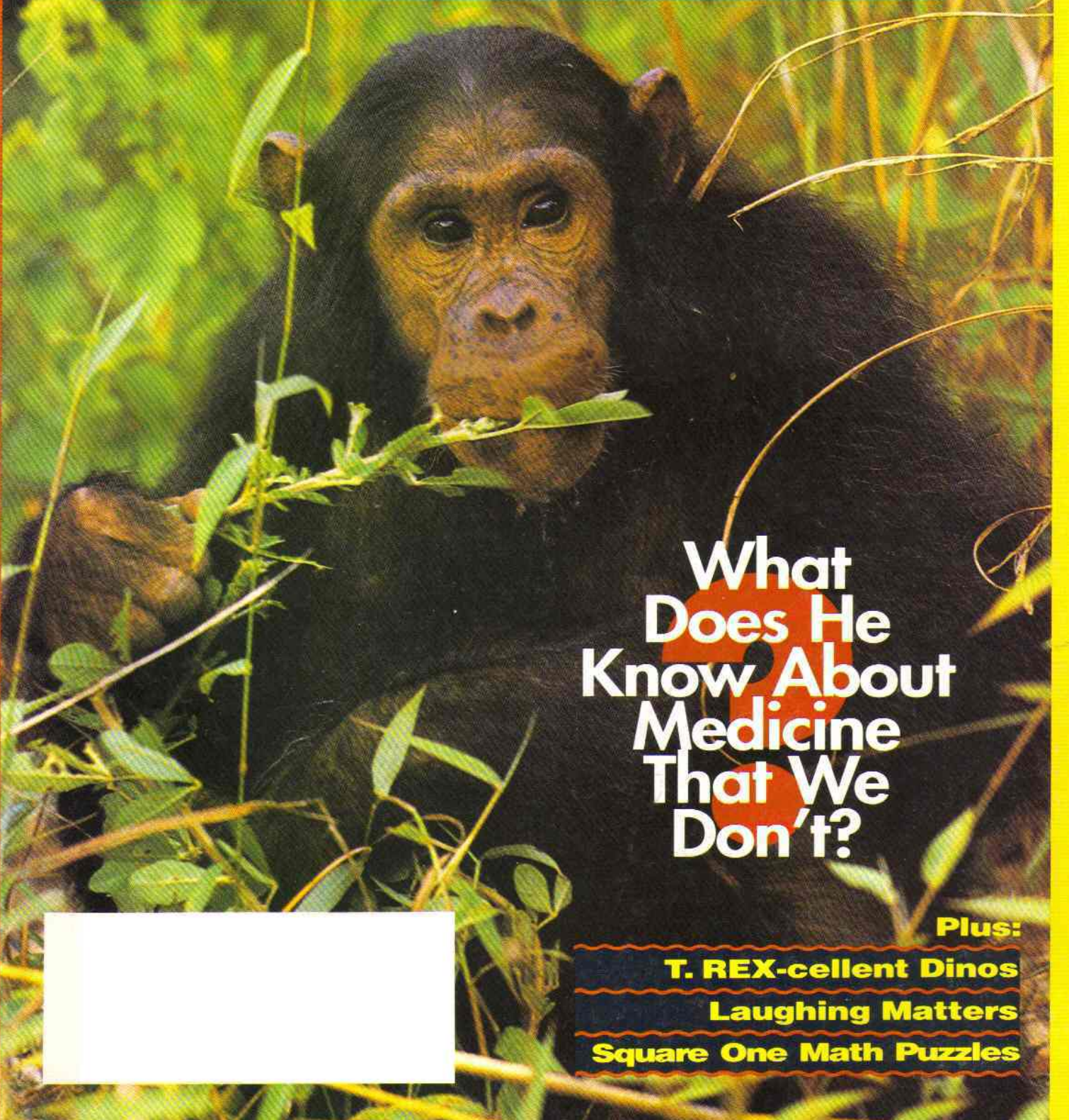


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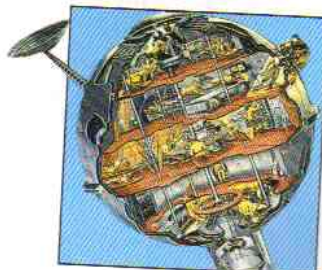
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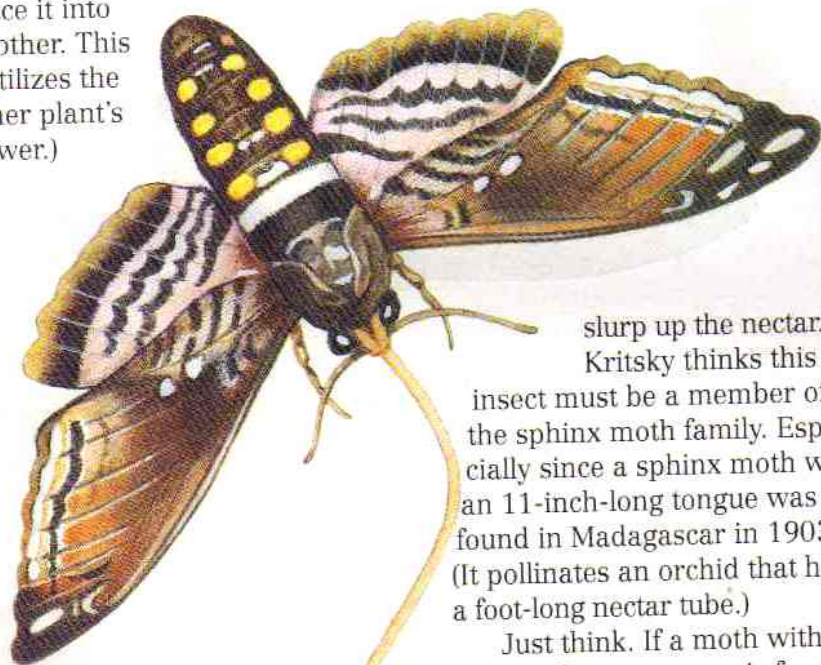
Chimps may lead scientists to
drugs that heal people. Photo ©
Gerry Ellis / The Wildlife Collection.



Say Ahh!

Have you ever seen a giant moth with a six-inch wingspan and a 15-inch tongue? It seems that nobody has. But bug expert Dr. Gene Kritsky is convinced a long-tongued moth is out there.

That's because scientists have found a rare orchid in Madagascar, an island off the African coast. In order for the flower to survive, it needs a bug with a long tongue to help pollinate it. (Pollination is when insects take the pollen from one plant's flower and place it into another. This fertilizes the other plant's flower.)

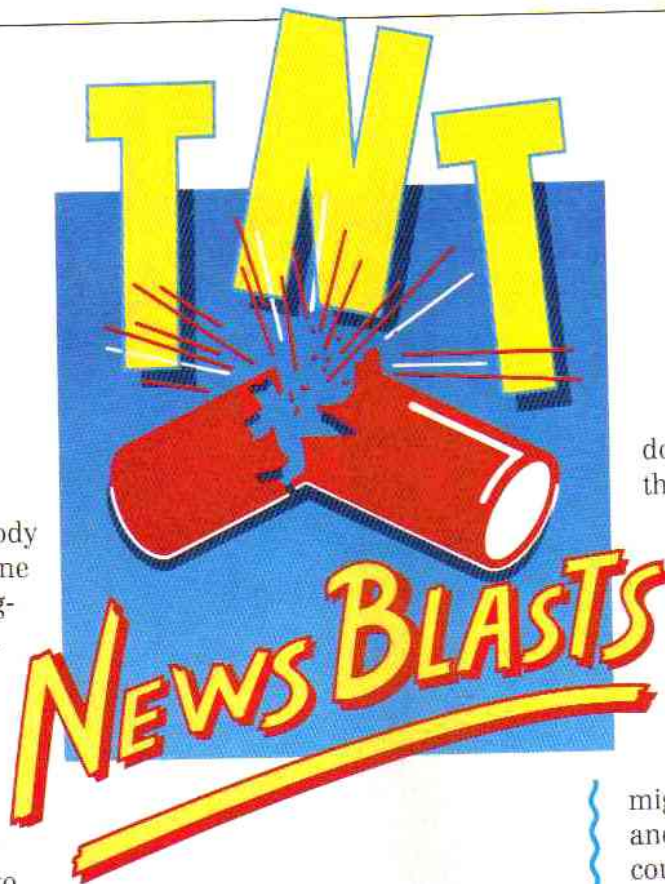


The orchid has a 16-inch-deep nectar tube. But the nectar only fills up an inch on the bottom. So, Kritsky argues, there must be an insect that can uncoil its tongue at least 15 inches—to

slurp up the nectar. Kritsky thinks this insect must be a member of the sphinx moth family. Especially since a sphinx moth with an 11-inch-long tongue was found in Madagascar in 1903. (It pollinates an orchid that has a foot-long nectar tube.)

Just think. If a moth with an even longer tongue is found, tongues will really start wagging!

Story suggested by Michael Abraham, Brooklyn, NY.



Totally Tubular!

Space exploration is going down the tubes—lava tubes, that is!

Lava tubes are made when lava rivers harden into tunnels of rock. Scientists say lava tubes on the moon may one day provide ready-made shelter for lunar settlers.

Some lunar lava tubes might be a third of a mile wide and 150 feet high! Astronauts could simply clear an entrance, pump up inflatable shelters and set up power sources.

Some scientists and kids in Oregon decided to test this idea. They couldn't go to the moon to set up a base. But they could go to Bend, OR, where there are lots of lava tubes.

The group set up the Oregon Moon Base in one of the lava tubes. They used plastic pipes and connectors to build a shelter. They also ran experiments to see what it might be like to live in the moon.

But research at the "moon base" isn't just kid stuff. Some NASA scientists are now using it to test lunar vehicles.



PHOTO: BRUCE WALDEN/OREGON MOONBASE

ILLUSTRATION BY MARTI SHOHET

Boxed In

When it comes to garbage, record companies will soon be changing their tune. The companies have decided to dump those long cardboard boxes that hold compact discs (CD's).

By next spring, no new CD's will be packaged in the 6-by-12-inch throw-away boxes. Record companies plan to replace them with smaller boxes. Eventually, the boxes might be dropped altogether.

Why the switch? Landfills are being choked by cardboard and paper products. (They make up two-fifths of all garbage in U.S. landfills.)

The long boxes are adding to this mounting trash pile. Nearly 300 million CD's are sold each year in the U.S. alone. And that means millions of pounds of

cardboard are being tossed in the trash. So trashing those boxes will help cut down on garbage pollution. Now that's music to our ears!

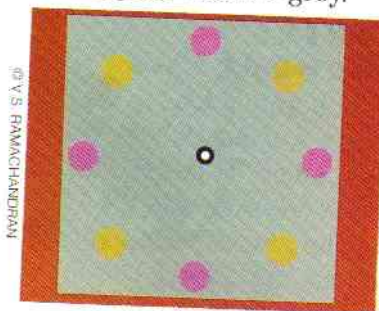


PHOTOGRAPH BY STAN ELLERMAN

Blind Spots

Now you see it, now you don't! Look closely at the white dot in the middle of the black spot.

After 20 seconds, you won't be seeing all the yellow spots. Some will disappear into the grey.



What's wrong with this picture? Nothing. It's all in your head, says Vilayanur Ramachandran, a scientist at the University of California at San Diego.

"If you keep staring at the yellow spots, your brain cells get tired and stop picking up the yellow signals," he explains. "But your brain doesn't like seeing nothing. So it fills in the gaps with the surrounding grey color."

Light Bite

Holy holograms, Batman! Super heroes aren't just in comics. They're now popping up in holograms—that you can eat!

What's more, they're a sweet treat. A food company in Boston has found a way to put holograms on chocolate and hard candy.

The candy is poured into a mold that has a pattern of ridges a few hundred-thousandths of an inch deep. The candy picks up this pattern as it hardens in the mold.

When light hits the ridges on the candy's surface, it bounces off and creates a rainbow of colors. These colors create a 3-D picture.

The image can move or change color, depending on the angle.

Up to 30 different scenes can be put on a single hard-candy surface. The company is working on "candy stories." As you eat through a layer, the picture changes. (For example, when you bite into a new layer, two super heroes clash.)

A 3-D candy "flick" is also in the works: Hold the candy up to the light and you'll see a mini-motion picture!



So What's New?

You tell us and you'll get a nifty CONTACT T-shirt—if we print your story. Send us any science story from the news that you think our readers would like to know about. (Be sure to tell us your T-shirt size and where you heard the story.)

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CONTEST ROUNDUP

Congratulations to the six winners of our Holiday Contest (December '91 issue). Mrs. Hornetloaf's secret message was WEAR YOUR MITTENS!

The grand-prize winner is:

Jordon Mahlestein, Durham, NC

Second-place winners are:

Suzanne Raper, Honolulu, HI
Eric Stopke, Mount Vernon, WA
Ben Janulewicz, Bourne, MA
Sarah Donohue, Santa Fe, NM
Candi Coventry, Inman, NE

NOT SO TASTY PASTRY

Dear CONTACT,

Is the cake on the January/February '92 cover real? It looks it!

Geoffrey Keck
Allentown, PA

Well, you might want to lick the icing, Geoffrey, but you wouldn't think a slice was nice. It was made from cardboard. Only the icing is real. It took more than five hours to decorate—and that was no piece of cake!

TOAST OF THE TOWN

Dear CONTACT,

I really enjoyed "Crazy About Collections" (March '92). We had a crazy collection drive in my school: bread tags. It took seven years to collect a million tags. At first, we didn't know what to do with all of them. Finally, we donated them to a children's museum. Now they're on display for the public to see.

Nathan Burk
Harvard, MA

We've been collecting letters about this article. Readers have shared their collections with us. But your school's bread tag collection is really fasten-ating! Your friends sure weren't loafing around!

OUT OF SIGHT

Dear CONTACT,

In your "Puppy Love" article (March '92), you said that you have to live in New Jersey, Delaware or Pennsylvania to raise a guide dog for The Seeing Eye Puppy-Raising Program/4H Project. But there is a program on the West Coast that my family helps. It's called "Guide Dogs for the Blind." We are now raising our second dog!

Brad Matz
Riverside, CA

That's great! We didn't mean to leave out our West Coast readers. We were only talking about one particular program. Hope we're out of the doghouse, Brad!

A LITTLE BIRD TOLD ME

Dear CONTACT,

I just wanted to tell you how much I like your magazine! You show me things I never knew before. Your article about parrots (March '92) really made me think. So, I wrote a report about it for school. Thanks for everything!

Lauren VanVorst

Sounds like you've soared to new heights, Lauren. We're glad you find our magazine so... uplifting.

WE WANT MAIL!

Dear Readers:

We love hearing from you. Your questions and ideas help us make CONTACT a better magazine. So why not drop us a line? We can't answer every letter, but we do read them all. Send your mail to:

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GOLD RUSH

This golden moment is brought to you by a tube sponge on a coral reef in the Caribbean Sea. The three-foot-long female sponge is pouring thousands of golden eggs into the current.

Every July, tube sponges release sticky, gold-colored strands. The strands, which can be up to six feet long, keep the eggs from drifting away from the mother sponge. That way, the eggs can be fertilized.

After a day or so, the sticky threads break up and become snagged on the coral reef. This gives the eggs a golden opportunity to "sponge" off the reef!

PHOTO: FRANKLIN JAY VIOLA

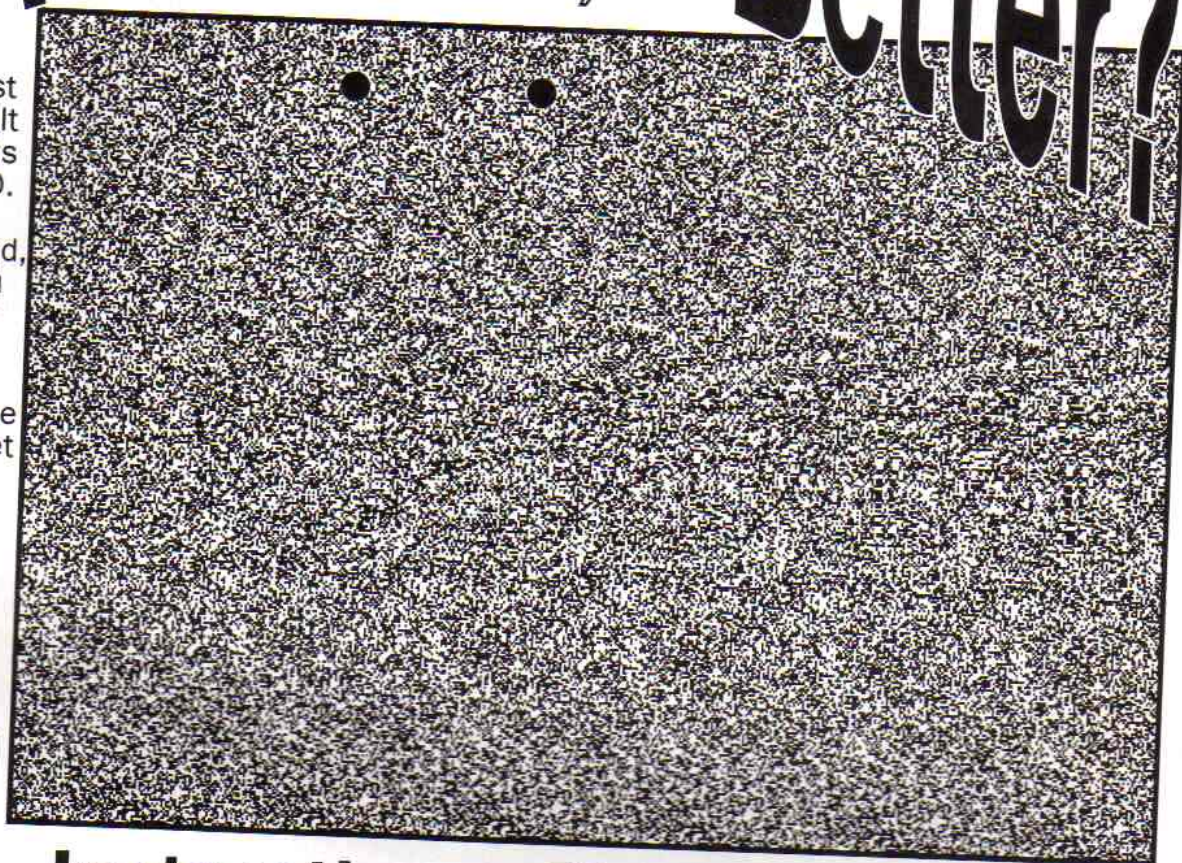
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ANIMAL DOCS

These "Experts" Are Leading Humans to New Medicines

By Christina Wilsdon

The chimp slumped over, ignoring the other wild chimpanzees. Here, in Tanzania, Africa, not even a mound full of termites could perk her up.

Finally, the sickly chimp crawled over to a bush and fumbled for some leaves. She swallowed the juicy parts of the plant's stems, spitting out any stringy bits. By the next

afternoon, the chimp was as good as new!

Biologists watching the chimp were boggled. Somehow, the plant had cured the chimp! Did the chimp know the plant would make her feel better? Or was it just a lucky accident?

Many scientists don't think it has anything to do with luck. They're discovering that some animals seem to use plants to "cure" them-

PHOTO © NANCY ADAMS/TOM STACK, ISTOCK



PHOTOGRAPH BY
PHOTOGRAPH BY

selves. And these animals are leading scientists to new plants that could cure humans!

Dr. Richard Wrangham, an anthropologist at Harvard University, agrees that animals may know something we don't about forest plants.

Wrangham got to know chimps and their diets while studying them for three years in Tanzania. He can rattle off their favorite foods in a snap.

"You must know a lot about an animal's feeding habits to know what it doesn't consider food," Wrangham told CONTACT. Every morning, he saw that most chimps ate fruit near their nests. Later on, they feasted on leaves.

When he noticed chimps getting up at dawn to eat the leaves of a plant they usually ignored, Wrangham thought something interesting was going on—especially when he saw that they'd sometimes walk for 20 minutes to find the plant. Another odd thing that caught his eye was how they ate the bitter leaves.

"They swallowed the leaves whole," explains Wrangham, noting that chimps usually chew their food well. "They seemed to rub the leaves around the roofs of their mouths. It looked like quite a chore! They wrinkled their noses and swallowed slowly. They gulped with their eyes shut." Once he even saw one chimp throw up after swallowing the leaves.

Wrangham wondered what could be so good about something that tasted so bad. He even tasted the bristly leaves himself. "They're large and rough," he exclaims. "I can't imagine swallowing them whole!"

Wrangham had a chemist analyze the leaves. He discovered that the leaves contain a red oil that kills different parasites and viruses. (Parasites are things that live in other creatures, like a dog's heartworms or fleas. Many are harmless. But some can make their host animals sick. Viruses cause diseases, too.) Later

Kodiak bears use roots to cure infections and fight ticks.

tests showed that the oil might even fight cancer and the AIDS virus!

Why don't the chimps chew the leaves? "Rubbing the leaves between the tongue and the inside of the mouth might allow the chemicals to enter the bloodstream directly," he suggests, "instead of going to the stomach, where they might get destroyed by acids."

It's similar to the way people take certain medicines, Wrangham points out. Some prescription drugs must be sucked under the tongue or between the cheek and the tongue.

Wrangham also learned that native people of Tanzania use these same leaves to cure upset stomachs. He thinks it's likely that chimps eat the leaves to kill parasites that bug their stomachs, too.

"They eat the leaves mostly during the wet season, when there are many parasites in the intestine," explains Wrangham. "The chimps seem to know what they're doing."

Monkey Business

Meanwhile, thousands of miles away, Dr. Karen Strier is studying wooly spider





A red howler monkey taste-tests a plant.

monkeys in Brazil. She uses the native people's name for them: *muriqui* (say: *moor-EE-key*).

Dr. Strier and a team of scientists made a surprising discovery while studying a group of *muriquis* in a section of the Brazilian rain forest: "The monkeys had no parasites at all!" she exclaims. Equally amazing, howler monkeys in the same forest were also free of parasites.

Most animals—including people—carry parasites. So this discovery sparked many questions: Why didn't these monkeys have parasites while monkeys in other forests did? Were they naturally parasite-free? Was the forest parasite-free? Or were the monkeys eating something that killed parasites?

Strier wondered if there were plants in their part of the forest that protected them from parasites. She discovered that howlers and *muriquis* eat pretty much the same foods.

"Some of these foods in their forest are high in tannins, which kill parasites," Strier told CONTACT. "It could be that the monkeys are protected from parasites by tannins in the foods they eat."

Tannin is a substance found in tea, some kinds of bark and certain bean plants. It's strong stuff—and that's why some native people in Brazil use tannin-rich plants as a medicine to control parasites. (That may also be the reason why some people drink tea when they have upset stomachs.) Just maybe, *muriquis* and howlers know how to cure their tummy troubles, too.



NATURE'S MEDICINE CABINET

Fewer than 3,000 plants have been tested to see if they contain chemicals that fight diseases. But this small number of plants has provided one-quarter of our medicines!

Native peoples have long used plants to keep healthy. People in the Amazon use over 1,000 plants as medicine. Today, Amazon people are helping scientists select plants to study. There are good reasons for looking more carefully at the green things growing around us. Take a look at some of these natural medicines.



Crow Indians once chewed willow bark to relieve headaches. Today we know that willow bark contains a chemical that turns into salicylic acid in the human body. This acid also goes by the name of aspirin!

To treat their stomach problems, the monkeys have to know which plants will help. How do they learn this? In many cases, the adults feed their sick babies certain roots and leaves. This teaches the youngsters which plants will cure them.

Care Bears

Not only scientists get expert "advice" from animals. Navaho, Chippewa and Sioux Indians have too. Their legends tell of bears teaching people how to use herbs and roots for medicine. It's possible that these legends are "rooted" in real life.

These tribes may have noticed that bears often use their long, strong claws to dig up roots and bulbs, which they then eat. The roots treat worms and stomachaches, and may also fight ticks and fungi. Bears could be rubbing themselves with this natural fungi killer to get rid of "athlete's foot of the fur"!

To fight infections and stomachaches, Navahos also eat the root. Maybe that's why strong medicines are still called "bear medicines" by some tribes.



Animal Docs?

Is it possible that many kinds of animals—besides chimps, monkeys and bears—use natural medicines?

"It seems very likely, and over the next decade we will learn more about it," says Wrangham. "For example, we know that birds weave grasses into their nests that kill off bacteria and keep the nest clean. It doesn't seem hard to believe that other animals may do the same thing."

Who knows? Perhaps the cure for the common cold lies in a small flower deep in the forest—and a mischievous monkey will guide us to it! ♦



PHOTO COURTESY OF KODAK PHOTO RESEARCHERS, INC.

What does a woolly spider monkey eat to treat its tummy troubles? Maybe a tannin treat!



Pacific yew trees growing in Washington and Oregon hold a drug called taxol in their bark. Taxol amazes scientists: It's a strong cancer fighter. But it takes the bark of three big trees to treat one patient for a year—and there aren't many yews left. Quinault Indians used to soak yew bark in water and drink it as a lung medicine.



The rosy periwinkle is a tiny rain forest plant with a big job. It's used to fight cancer. It takes 30,000 pounds of periwinkle leaves to make just one ounce of medicine.



Quinine is the cure for a deadly disease called malaria. The drug comes from the bark of the cinchona tree in South America. To the native people, it was known as the "bark of barks."

HA!
HA!
HA!



PHOTO COURTESY FOTO FANTASIES

NO JOKE: LAUGHTER'S GOOD FOR YOU!

By Deborah Heiligman

*Why did the duck cross the road?
It thought it was a chicken.*

Go ahead and laugh! Even if you don't think the joke is funny, laugh anyway. When you laugh, it feels good! Experts who study laughter (no, they're not called hahalogists) say that it not only feels good—it's good for you. The study of laughter is part of a scientific field called psychoneuroimmunology (say: *SIGH-ko-NUR-o-im-u-KNOL-o-gee...whew!*) This is the study of how the mind helps heal the body.

According to the psychoneuro—what the heck, let's call them hahalogists—if you laugh a lot, you'll be healthier, happier, have more friends and learn better.

Why did the little kid tiptoe past the medicine chest? He didn't want to wake the sleeping pills.

Laugh for the Health of It

We're not saying you should cut gym class to watch cartoons. But

studies do show that laughing is great exercise. According to psychiatrist William Fry, a 20-second-long belly laugh gives your heart as good a workout as three minutes of hard rowing. He calls it "internal jogging." Just like exercise, laughing increases your heart rate and exercises the muscles used for breathing.

And, luckily for all of the bad joke-tellers of the world, fake laughter does the same thing as real laughter. Your body doesn't know you think the jokes are corny.

How is a laugh like an apple? A good laugh a day could keep the doctor away. Laughing may help cure some sick people. According to researchers, laughing decreases chemicals in your body produced by stress. And it increases chemicals that fight disease and help you get well.

In some U.S. hospitals, doctors and nurses even include laughing as part of the treatment for very sick people. Nurses wear buttons that say "Warning: Humor Can Be Hazardous

HA!

HA!

to Your Illness." Hospitals have "funny rooms," where patients watch cartoons, sit-coms and funny movies. Clowns visit and doctors leave their patients with a joke. You, too, can help a sick friend or relative by giving them a good laugh. Like this one:

A man tells the doctor that he thinks he's a chicken. Doctor: How long has this been going on? Man: Three years. Doctor: Why didn't you come in here sooner? Man: Well, the eggs are delicious.

Laughter— the Ultimate Stress- Buster

Imagine this: Your mother was furious at you when you left for school because your room was a disaster area. Your best friend says she doesn't like you anymore. And now your teacher has announced a surprise quiz. You are ready to scream or cry or...what should you do?

You guessed it. Laugh!

Joel Goodman is the founder and

director of the Humor Project, Inc., in Saratoga Springs, NY. He says that laughing when you're in a tough spot really helps. Laughter takes your mind away from your problem. It helps you lighten up, and that helps you deal with the situation. And it keeps you breathing. (Have you ever noticed that when you're really scared or upset, you hold your breath?)

Okay, here's another question: How can you possibly laugh when you feel like the world is getting worse by the minute?

Goodman told CONTACT, "Do the Bart Simpson maneuver. Pretend you are Bart (or another favorite cartoon or TV character) and ask yourself what he would do or say in this situation." Bart might stand on his desk and say, "Don't have a cow, man." Now, you're not supposed to *actually* say anything. But just thinking about saying something funny will make you giggle.

Another technique, says

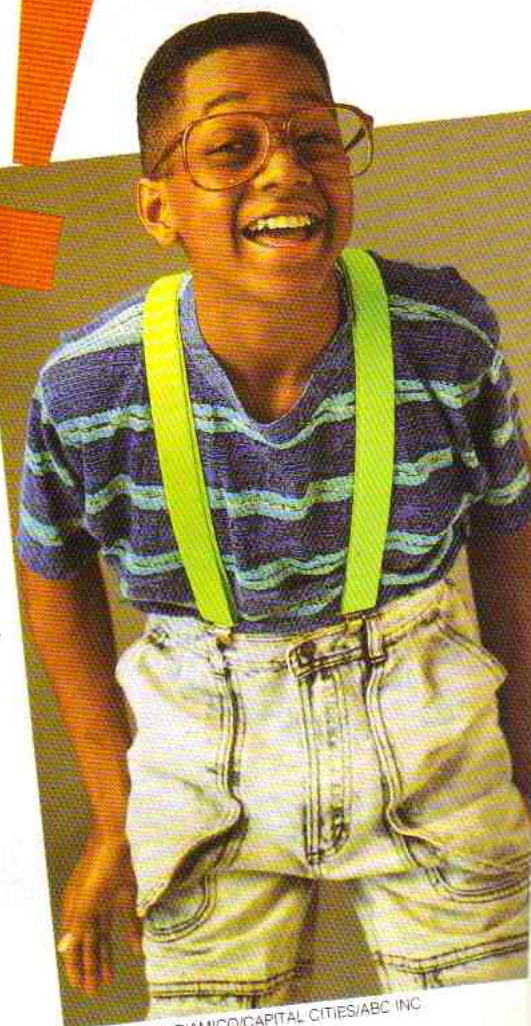
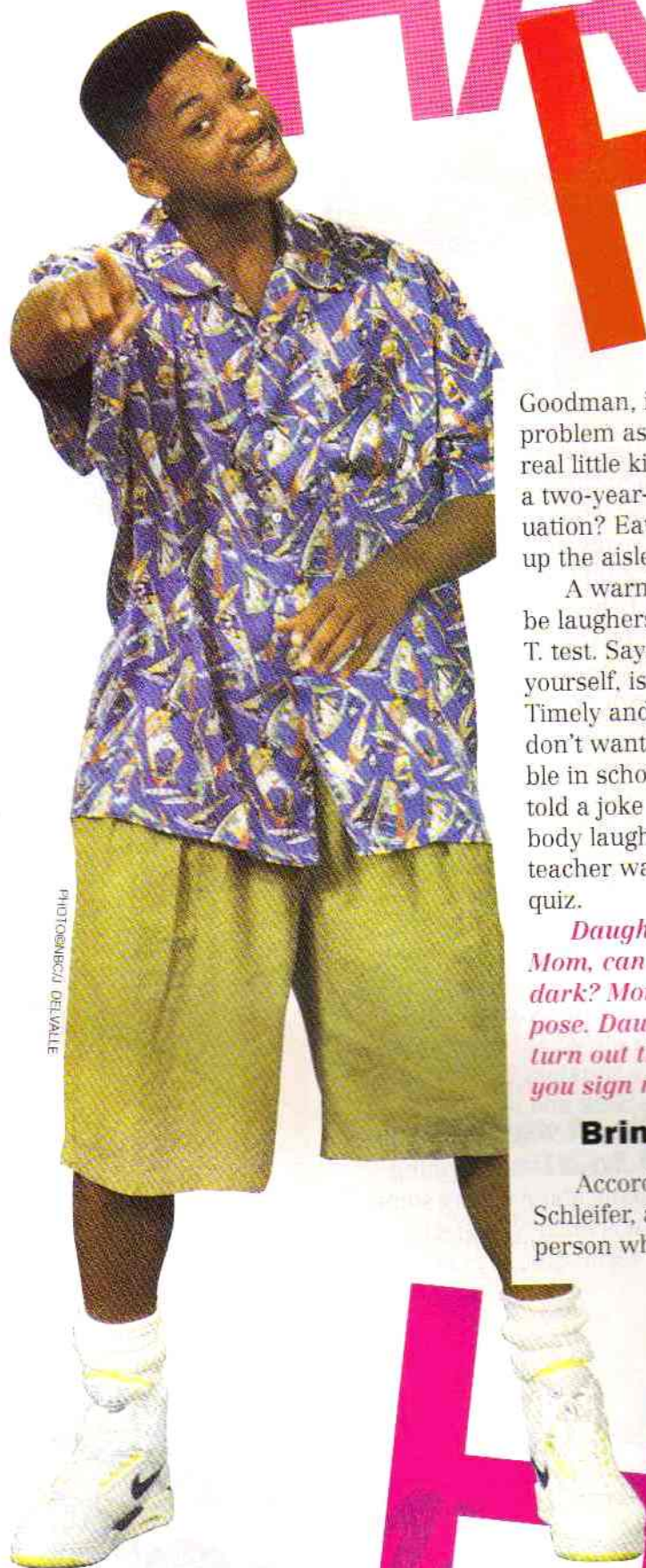


PHOTO © BOB D'AMICO/CAPITAL CITIES/ABC INC



PHOTO © CAPITAL CITIES/ABC INC

KNOCK! KNOCK!



PHOTOGRAPH BY DELVALLE

Goodman, is to "think of the problem as if you were a real little kid." What would a two-year-old do in this situation? Eat the quiz? Run up the aisles screaming?

A warning to all would-be laughers: Do the A.T. & T. test. Says Goodman, "Ask yourself, is it Appropriate, Timely and Tasteful?" You don't want to get into trouble in school because you told a joke that made everybody laugh just as the teacher was passing out the quiz.

Daughter to Mom: Mom, can you write in the dark? Mom: Yes, I suppose. Daughter: Good. I'll turn out the light, then you sign my report card.

Bring It Home

According to Hedy Schleifer, a psychologist (a person who studies human

behavior), the family that laughs together loves each other better. "The best thing a family can do is laugh a lot together," Schleifer told CONTACT. "When you laugh with someone, you bond, and become friends. When you laugh, you feel safe and relaxed. So you feel safe with the person you are laughing with." That's true with your friends and with your family.

If you laugh a lot, chances are people will want to spend time with you. But, say Schleifer and other psychologists, this is true only if your humor is not "toxic," or poisonous. Toxic humor is humor that insults someone, or makes a joke at someone else's expense. Good humor is based on acceptance. Making fun of yourself or an object will always get a



COURTESY FOTO FANTASIES

laugh. But jokes that make fun of another person or group of people aren't funny.

There are three kinds of people in the world. People who are good at math and people who aren't.

Laugh and Learn

Guess what? Laughing can make you a better student! We already know humor can ease tension. And you definitely learn better when you're relaxed. Laughing also gives you a new way to look at a problem.

If you take a laughter break while doing homework or studying for a test, the laughter will free up your mind. Then when you come back to the work, you may be able to see it in a new, creative way.

In one study, students who watched a comedy show before taking a math test did

better than students who watched a serious show. And the kids did better than students who watched a movie about math. Of course, no matter what kind of shows you watch, you'll still fail your tests unless you study for them.

What do you get when you cross a cow and a duck? Milk and quackers.

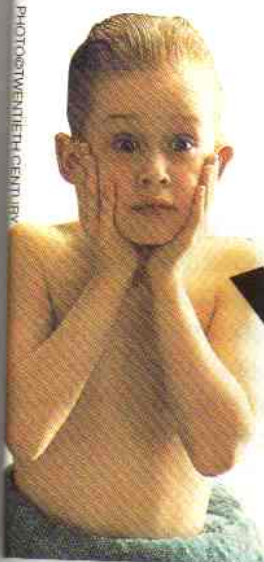
The Last Laugh

The hahalogists agree: When someone says, "Grow up and be serious!" don't necessarily listen. Most grown-ups sometimes want to be able to see the world like young people, and laugh at things like young people. So if you're a young person, do what comes naturally—keep laughing!

Knock, knock. Who's there? Tissis. Tissis who? Tissis the end. ♦

HK

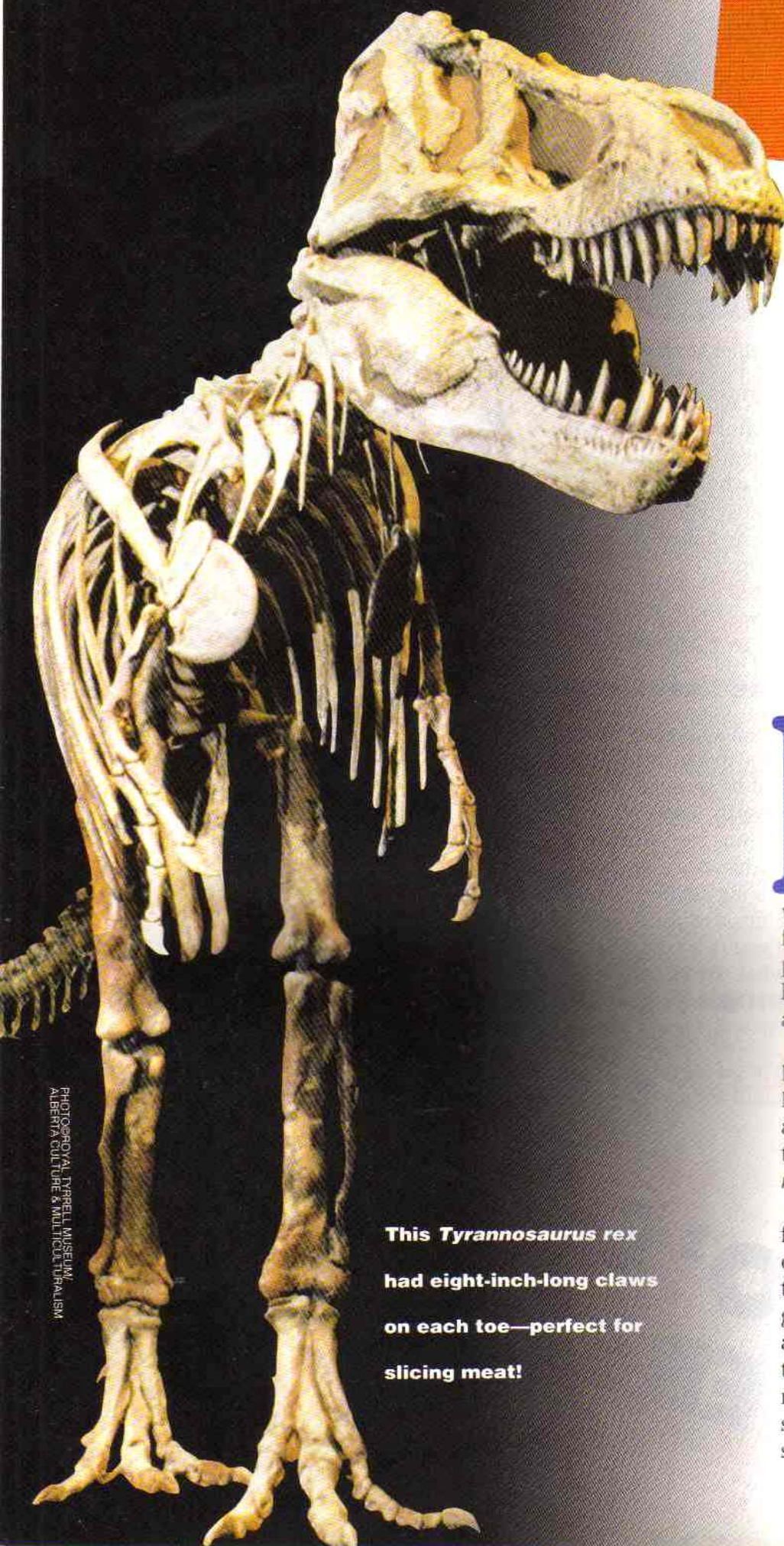
WHO'S THERE?



PHOTOGRAPHY CENTRAL



PHOTOGRAPHY CENTRAL
COURTESY FOTO FANTASIES



**This *Tyrannosaurus rex*
had eight-inch-long claws
on each toe—perfect for
slicing meat!**

PHOTOGRAPH BY TYRELL MUSEUM,
ALBERTA CULTURE & MULTICULTURALISM

It's a blistering summer day in 1990. In the Badlands of Montana, the sun is beating down on the sweat-soaked crew working in a large pit.

Using jack hammers, the workers drill the ground, making five, huge blocks of sandstone and plaster. One by one, the three-ton blocks are lifted out of the trench and loaded onto a semi-truck.

It hauls the treasure away to the Museum of the Rockies in Bozeman, Montana. There, scientists chip away at the blocks and uncover the find of the century: a 40-foot-long *Tyrannosaurus rex* skeleton!

"It's the first time we've ever found an almost-complete skeleton of a *Tyrannosaurus rex*," Jack Horner told CONTACT. He is a paleontologist—a scientist who studies fossils—at the Museum of the Rockies. "In the past, only bits and pieces of *T. rex* bones have been found. But this skeleton is only missing half the tail, some ribs and a lower jaw."



ONES

SCIENTISTS FIND TWO (!) TYRANNOSAURUS SKELETONS

By Elizabeth Vitton

Tyrannosaurus rex (say: tie-RAN-uh-sore-us wrecks) means "king of the tyrant lizards." And this one is definitely king size! From snout to tail, it's as long as a moving van. When alive, it weighed more than four tons.

The 65-million-year-old skeleton was the biggest, baddest, most-complete T. rex ever seen. Until they found "Sue."

It's A Girl!

Two months after Horner's crew dug up his dino, paleontologists in South Dakota found another nearly complete T. rex. But it's even bigger. From nose to tail, it's 41 feet.

This *Tyrannosaurus rex* is also a lot heavier. It probably weighed five tons. That's as heavy as two hippopotamuses!

What's more, the big-boned T. rex is probably a "she." Or at least that's what paleontologist Peter Larson thinks. He is studying the T. rex at the Black Hills Institute in South Dakota. Larson and his staff call the T. rex "Sue," after Sue Hendrickson, an assistant who found the fossil in a dry stream bed.

"I believe the dinosaur found

in Montana is male," Larson told CONTACT. "The female is the more heavily built one."

Why would the big one be female? Larson says it gets down to numbers. In dinosaur bone beds, there are more remains of heavily built dinosaurs than lightly built ones of the same

species. So, he argues, the large numbers of stocky dinos must have been females.

"There's no great reason to have tons of males hanging around," Larson laughs. "But there's good reason to have lots of females—they're laying eggs and producing young." 🦖



**"T. REX
PROBABLY
COULD
HAVE USED
BRACES!"**



PHOTO: LARRY LAMBERT/1992 ORNAMENTATION INT'L CORP.

PHOTO: ROYAL TYRRELL MUSEUM/
ALBERTA CULTURE & MULTICULTURALISM

Scientists may never be able to tell female *Tyrannosauruses* from males. But one thing is sure: Both had scary-looking chompers!

"The teeth are deadly," paleontologist Jim Farlow told CONTACT. He's an expert on dinosaur teeth at the University of Indiana. At one time, he says, T. rex could have had 50 dagger-like teeth—some as long as 12 inches! The edges are serrated, or jagged, to help tear off huge hunks of flesh.

Tyrannosaurus rex had an endless supply of these tough, thick teeth. Since its teeth were always getting worn down or broken, new ones grew in to replace them. So the meat eater always had a jaw full of teeth at different heights.

"T. rex probably could have used braces," jokes Robert Bakker. He's a paleontologist at the University of Colorado. "Its teeth are like railroad spikes. They're bizarre."

Tough Luck

A T. rex could definitely sink its teeth into something. And one did—right into the dino named Sue! Larson and his staff found part of a T. rex tooth inside her neck. She was also bitten on her face.

"Those two injuries never healed properly," Dr. Larson adds. "We've found drainage holes around these wounds for pus. They were running sores that probably bothered her all the time."

Sue was a "walking Band-Aid," says Larson. She had bones broken in her jaw, ribs, spine, skull and tail. "I've looked at a lot of fossils in my life," he claims, "but this is the worst case of bad luck I've seen!"

Sue also had a badly broken leg. Dr. Larson thinks another T. rex may have cared for her and brought her food until her leg healed. "Lions will take care of an injured member of their pride," he points out. "So why couldn't dinos?"

Sue might have had a family to

look after her. Paleontologists found three *Tyrannosauruses* near her body. "Nobody has ever found a group of them before!" Larson exclaims. "We've found just a few bones, but they're all different sizes. Maybe there was a dad, a junior and a baby."

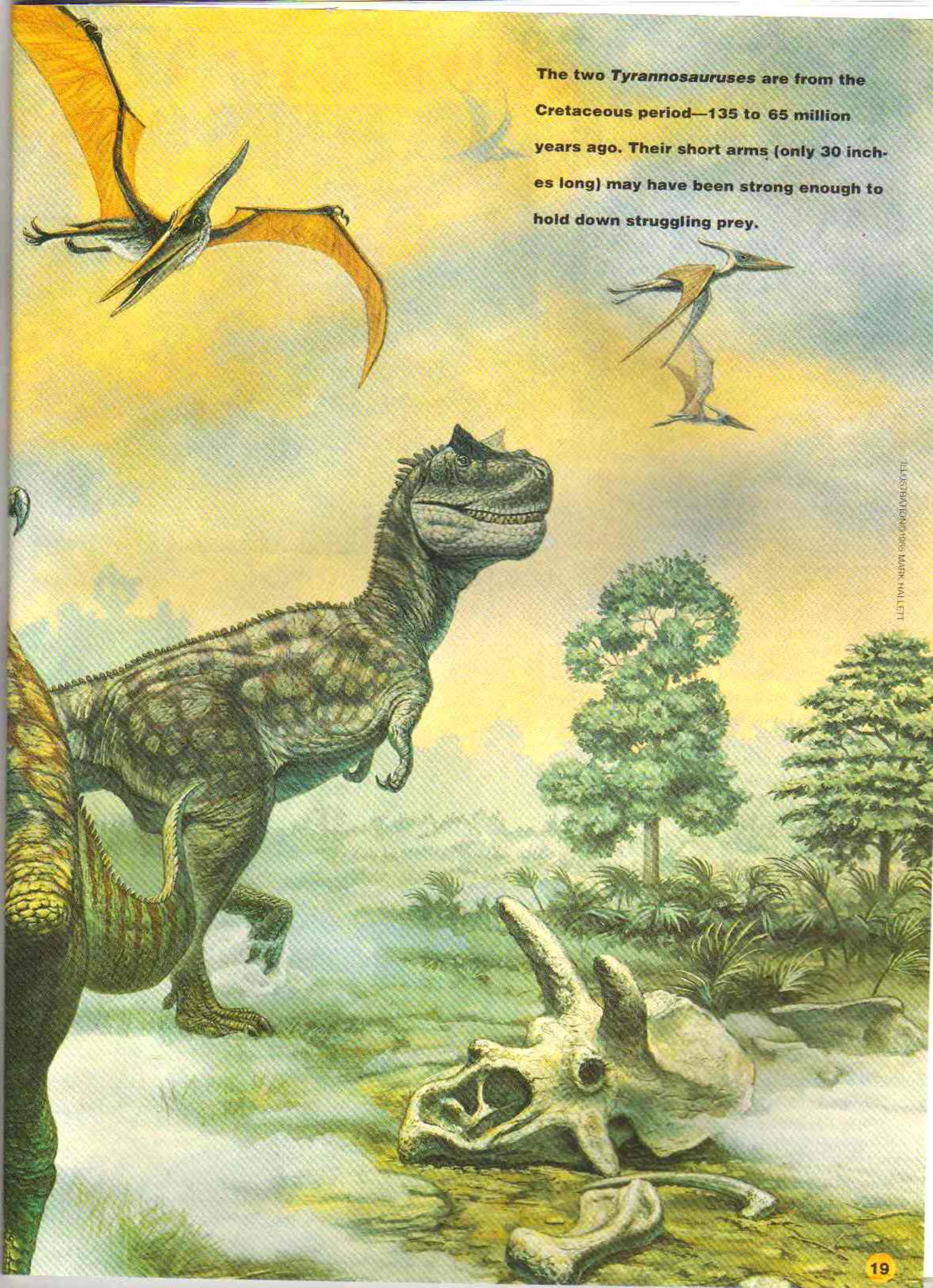
Whatever happened, Sue took a licking and kept on ticking. Larson thinks she might have lived for 100 years, or longer.

Meet the Meat Eaters

Scientists hope Sue and the Montana dino will help them figure out just what kind of hunter T. rex was. Some think the meat eater actively hunted for prey. Others believe it was a scavenger that ripped apart dead animals. ☞



The two *Tyrannosauruses* are from the Cretaceous period—135 to 65 million years ago. Their short arms (only 30 inches long) may have been strong enough to hold down struggling prey.



FROM DIG TO DINO-MITE REX!

Dr. Farlow says T. rex was probably a little of both. "Most meat-eating animals, if they can find a dead carcass, will say: 'Hey, it's party time.'"

Dr. Bakker believes *Tyrannosaurus rex* hunted in packs, just like hyenas and wolves do today.

"All the known footprints of meat-eating dinosaurs have shown up in clumps," Bakker told CONTACT. "When they cruised for food, they probably moved as a group around their prey. They pranced and faked until one got in close and CHOMP! End of story."

Sue and her relatives were alert hunters, says Bakker. Grooves on the T. rex cheekbones show that the outer ear canal wrapped around the head. This way, both ears could prick forward and help the animal pinpoint the distance and direction of its prey.

A T. rex also had a keen sense of smell. "It would stand on its tippy toes," describes Bakker, "and start sniffing the air. Then, bingo! Off it would go, tracking the scent of its prey."

How do scientists know that a T. rex snout is a good sniffer? Like dogs, wolves and hyenas today, it had tubes, called turbinals, inside its nose. (Special X-rays, called CAT scans, helped scientists see these paper-thin bones inside the snout.) Turbinals would have helped the T. rex pick up smells.

Once a T. rex picked up the scent of its prey, it really got going. Scientists think a T. rex could cruise at about seven mph. At top speed, some guess it went as fast as 20 mph.

T. rex was a fast, mean, fighting machine. "It wasn't a common animal," Dr. Farlow agrees. That's why it's so amazing that scientists stumbled onto not one, but two of these Cretaceous critters. What's the reason for the double find? Dr. Farlow shrugs and laughs, "It may be pure dumb luck!" ♦

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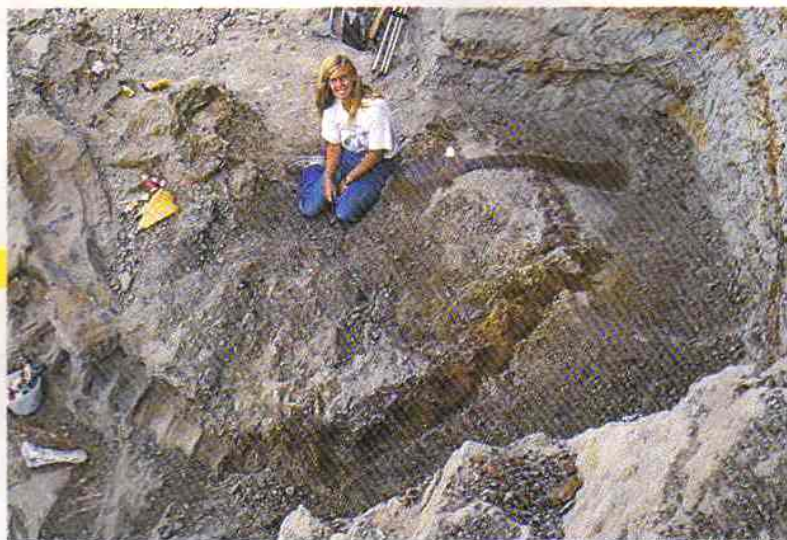
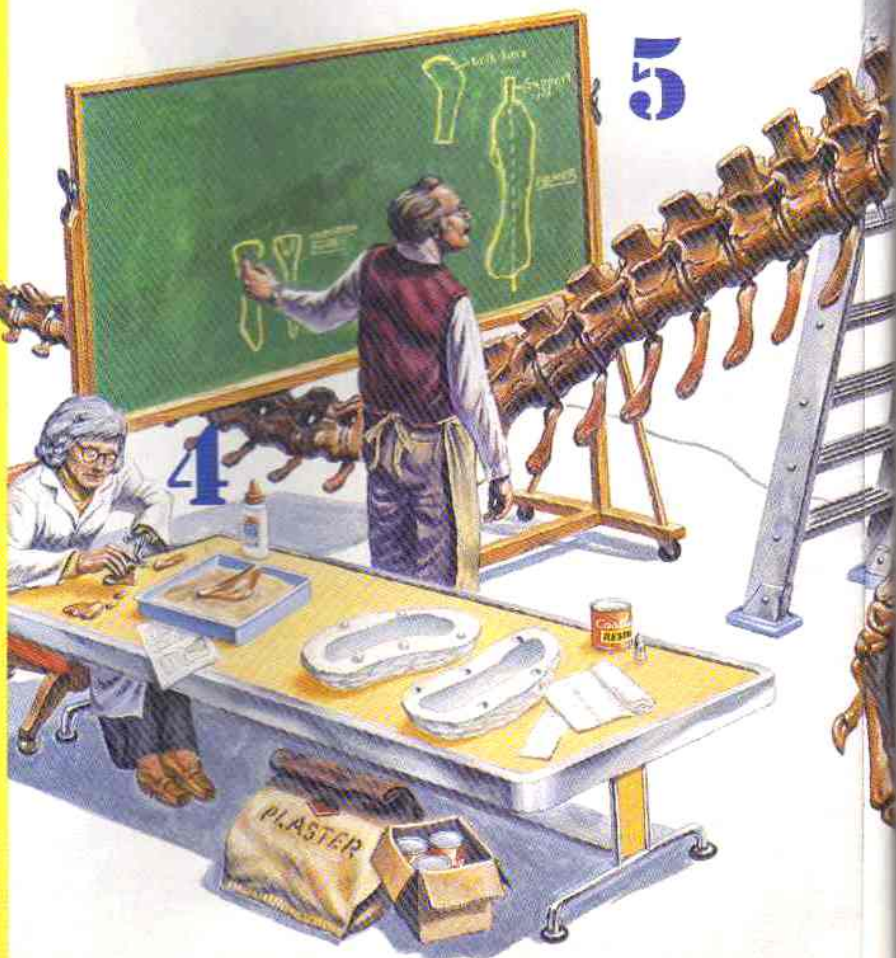


PHOTO COURTESY BLACK HILLS INSTITUTE OF GEOLOGICAL RESEARCH, INC., HILL CITY, SD

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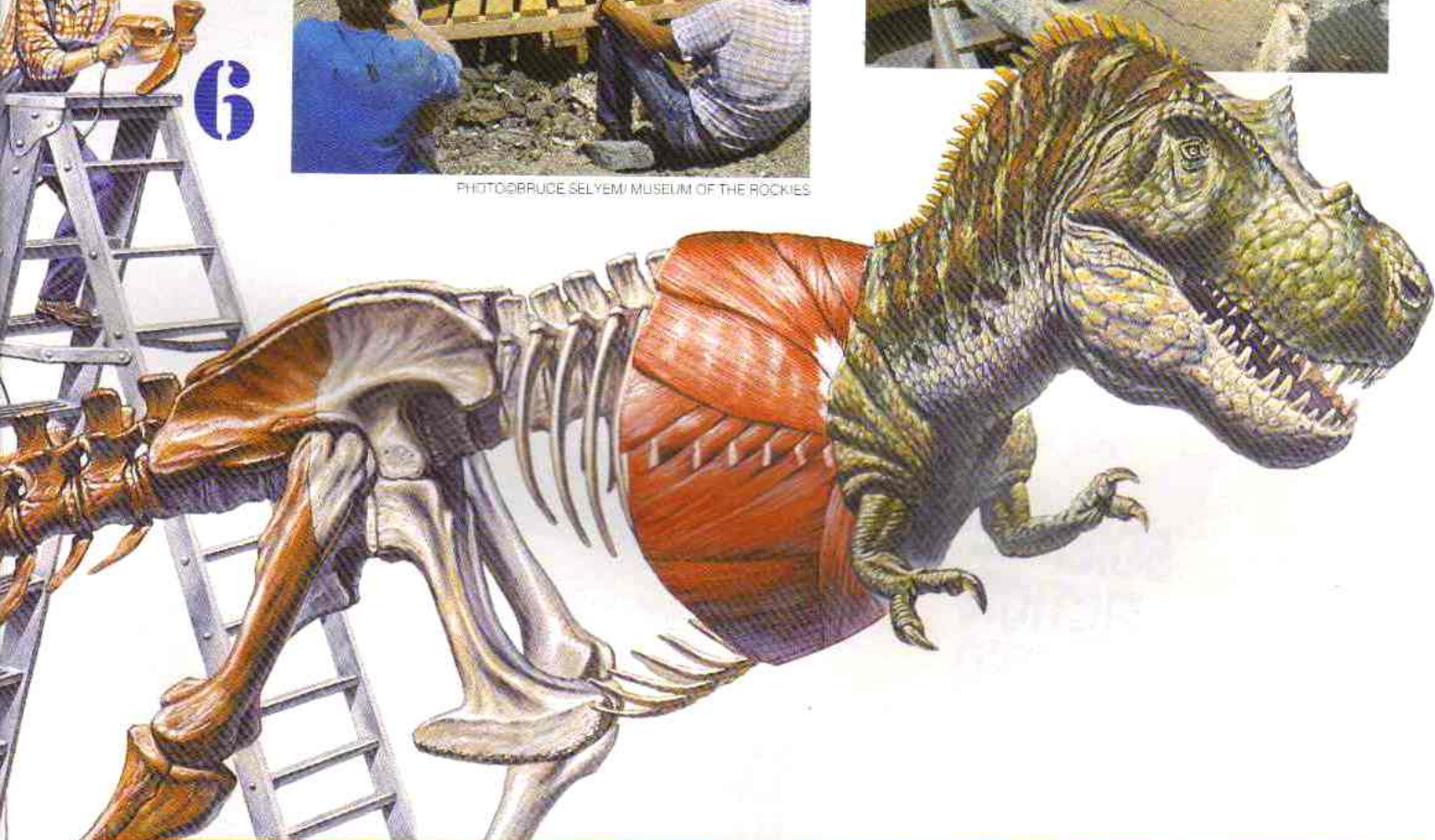


PHOTO © BRUCE SELVEM/ MUSEUM OF THE ROCKIES

3



6



1 It all begins when scientists discover a bunch of dino bones. At the dig site in South Dakota, paleontologist Sue Hendrickson kneels near her big find: "Sue" the T. rex.

2 Plaster-soaked "jackets" are wrapped around the fragile bones. Then workers dig out the skeleton in blocks and lift them from a trench.

3 At the museum, a worker removes plaster jackets from the bones with a cast cutter—the same kind doctors use.

4 The bones are cleaned, and broken ones are glued back together. Any missing bones are recreated out of plaster.

5 When the bones are repaired, scientists try to figure out which one goes where.

6 Hundreds of bones are attached together to make the T. rex skeleton. Marks left on the bones show how the muscles were attached and how they worked. Scientists can then guess how the dino may have looked.

HIGH-FIVE FOR SCI-FI!

SCIENCE
FICTION
HAS HELPED
SPACE TRAVEL
TAKE OFF



Who says the sky's the limit? Not the people taking part in the International Space Year.

Governments worldwide have made 1992 the year to celebrate the past, present and future of space exploration.

So let's hear it for the world's important space pioneers: scientists, astronauts and...science fiction writers.

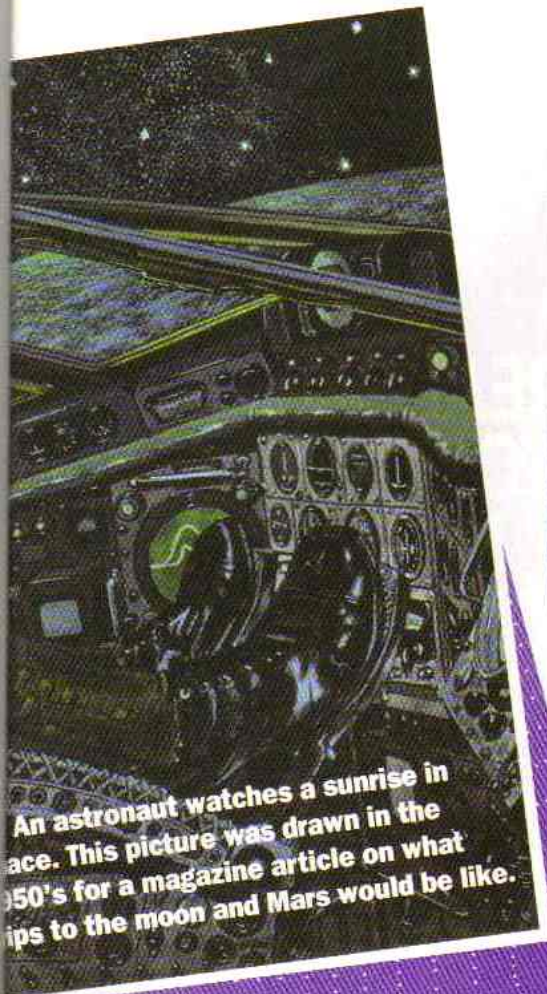
Sci-fi writers? Yes! Through the ages, they have dreamed and written about going into space. And their stories have inspired some scientists to make those dreams come true.

Early science fiction writers weren't very scientific. Their heroes bounced into space on springs, sailed on balloons or tied themselves to the backs of birds.

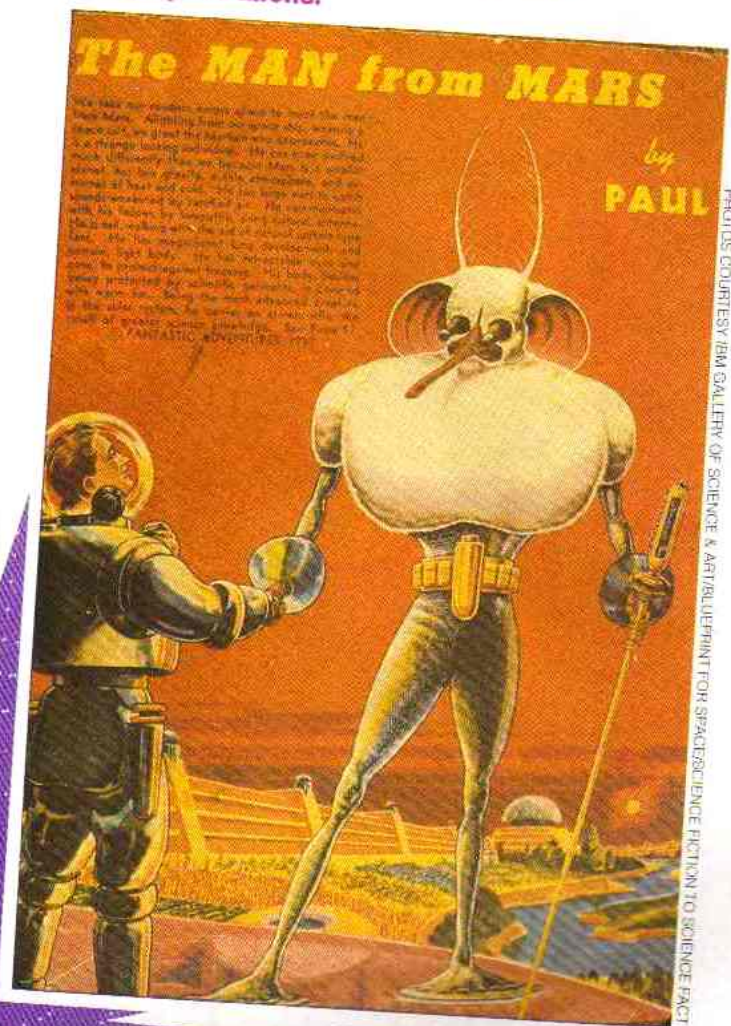
The hero of one 17th-century story attached sealed bottles of water to his waist. As the water evaporated in sunlight, the vapor rose. And so did the man!

In the 20th century, rocketry really took off. And science

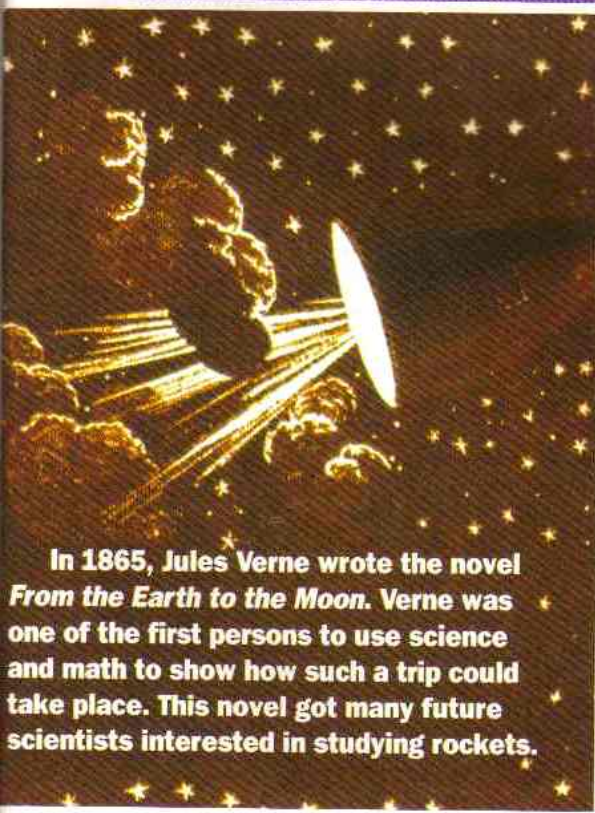
Earthmen faced this giant Martian in a 1939 *Fantastic Adventures* magazine. Lots of stories in sci-fi magazines had humans meeting (and usually fighting) scary space aliens.



An astronaut watches a sunrise in space. This picture was drawn in the 1950's for a magazine article on what trips to the moon and Mars would be like.



PHOTOS COURTESY IBM GALLERY OF SCIENCE & ART/UPPRINT FOR SPACE/SCIENCE FICTION TO SCIENCE FACT




In 1865, Jules Verne wrote the novel *From the Earth to the Moon*. Verne was one of the first persons to use science and math to show how such a trip could take place. This novel got many future scientists interested in studying rockets.

fiction took off with it. Space stories became more popular and more realistic. Famous sci-fi writers, such as Robert Heinlein, Ray Bradbury and Arthur C. Clarke, wrote stories in which people traveled to Mars and beyond.

It took science a long time to catch up to science fiction. But eventually, humans did blast into space. And for that, writers can take a little credit: Some NASA scientists say they got interested in space in the 1950's—after reading in magazines what future space travel might be like.

So maybe the kids who read the science fiction of today will become tomorrow's astronauts and space scientists!

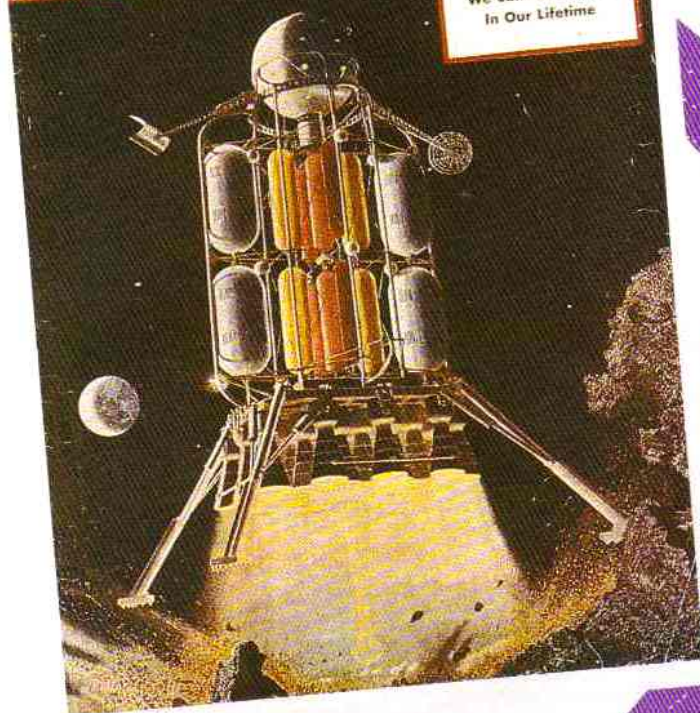
These pictures are from stories and articles about space flight. They appear in an exhibit called "Blueprint for Space." It shows how science fiction and science fact came together. In early 1993, the exhibit will be at the Smithsonian Institution's Air and Space Museum, in Washington, DC. It's out of this world! 

Collier's

OCTOBER 16, 1952 • FIFTEEN CENTS

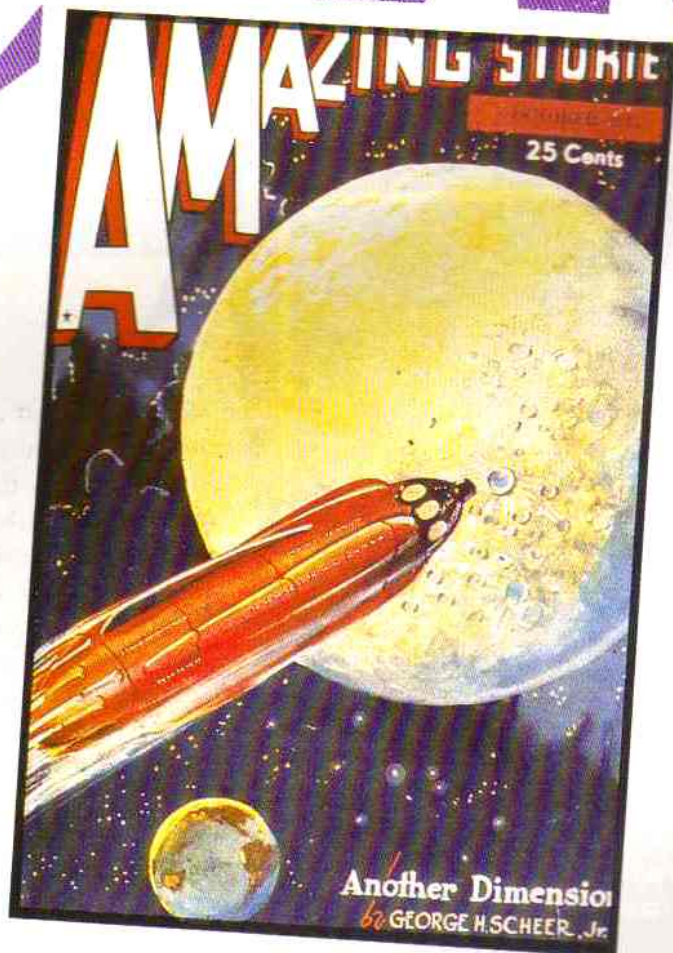
MAN ON THE MOON

Scientists Tell How
We Can Land There
In Our Lifetime



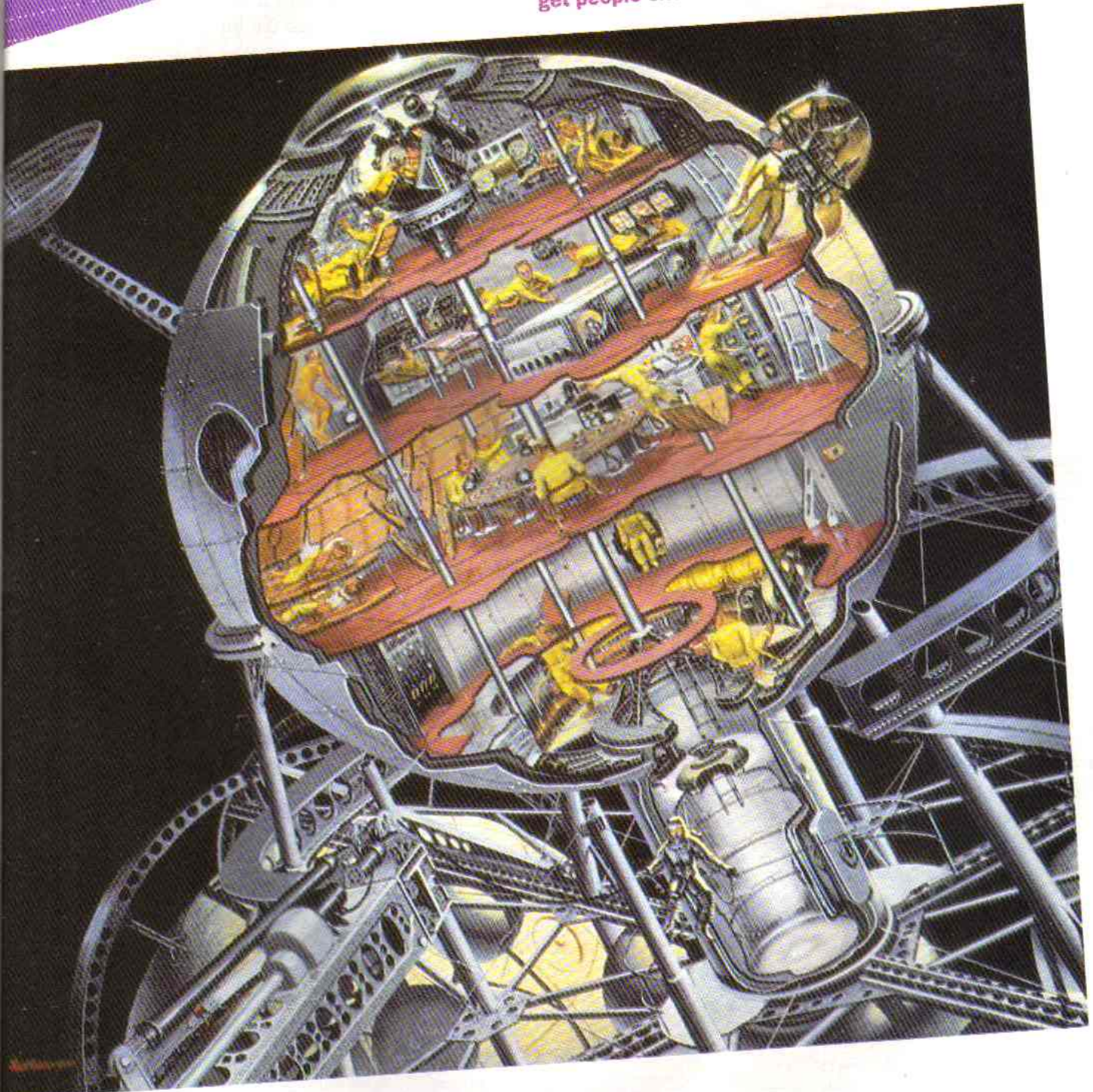
In the 1950's, Collier's magazine ran a series of articles on how humans could conquer space. Written by rocket scientist Wernher von Braun, the articles were ahead of their time. They talked about three-stage rockets, space stations powered by sunlight and orbiting telescopes.

Amazing Stories was the first ever science fiction magazine. It was started in 1926. Sci-fi magazines were especially popular from the 1930's through the 1950's.



SCI-FI
READERS OF
TODAY MAY
BECOME
TOMORROW'S
ASTRONAUTS.

This cutaway of a moon ship appeared on the cover of *Collier's* magazine. The article predicted that manned vehicles like this one would one day land on the moon. The *Collier's* series helped to get people excited about space travel.



THE TIME TEAM

Jenny of Troy

By Curtis Slepian

From the diary of Sean Nolan

The whole crazy problem began in the school cafeteria.

I was choosing between an olive loaf and a tunafish sandwich when my friend, Pat Rock, nudged me in the ribs. "Hey, get a load of Steve Hastings. He's hitting on Jenny again."

I swiveled my head around. Football captain Steve "Hercules" Hastings was sitting next to Jenny Lopez. They were laughing together.

"Big deal," I said. "It's none of my business."

"Yeah, sure," yucked Pat. "Why don't you tell Hastings to get lost? You're not afraid of him, are you?"

"Me afraid of Hercules Hastings?" I scoffed. Well, okay, maybe a little.

Jenny couldn't really be interested in that big jock. But just to make sure, I asked her between classes if she wanted to time travel that evening. (The tachyon machine she made for the science fair hadn't allowed us to travel through time until I dropped it. So I should get credit for making it work!)

Jenny shook her head. "I'm, ah, busy tonight."

"You mean you're seeing Steve Hastings."

"Well, yes."

"Cool." But I didn't feel so cool.

After school, I sulked in my room like a little kid. I wasn't going to let that football hero steal Jenny from me. Of course, she and I have never gone out or anything. And she's never said she likes me. In fact, she

usually says I annoy her. But I think that's because deep down she sort of likes me. Of course, I could be wrong.

Anyway, I had to break up their date. And then I figured out how!

Breaking a Date

At 7:00 that evening, I rang the Lopez's bell. Jenny answered. She was dressed up and looked excellent. "What are you doing here?" she said.

"I need a favor," I replied. "I want to borrow your tachyon machine and a universal translator." Those were earplugs we got on an adventure in the 21st century. They let you understand and speak any language. They also come in handy in Mr. Pierre's French class!

"You want to time travel by yourself?" asked Jenny.

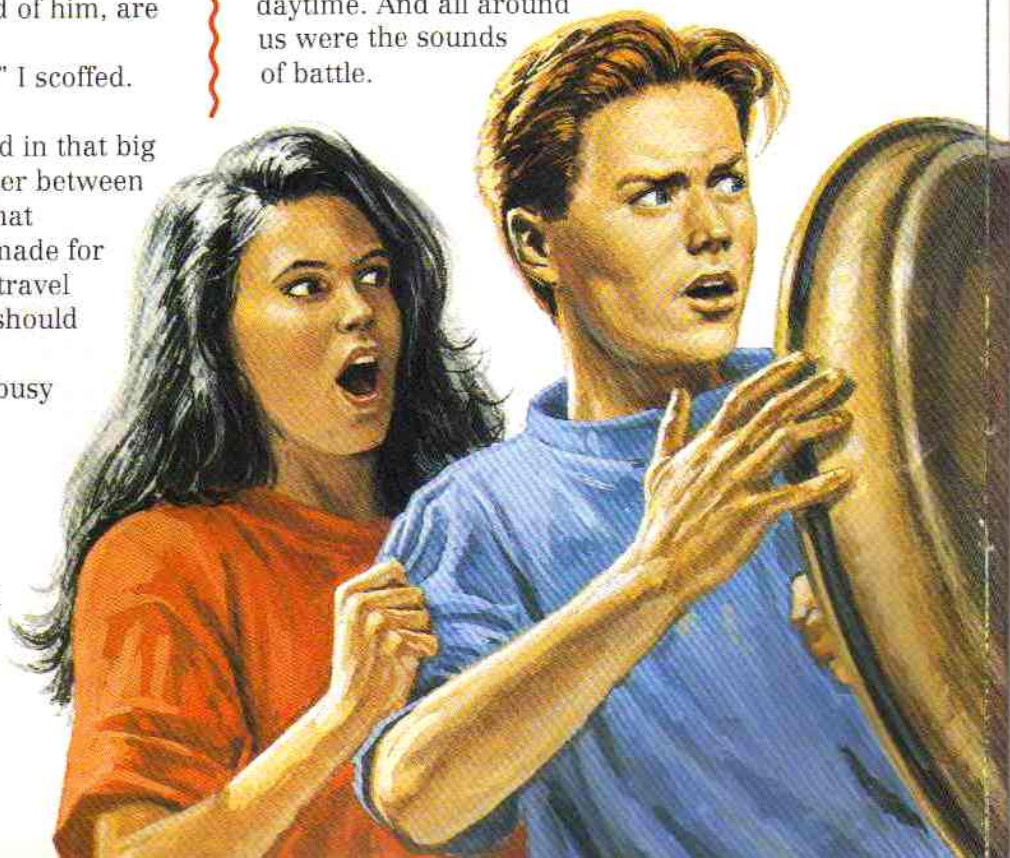
"Sure. Why not?"

She shrugged. "Whatever."

We went up to her room. She handed me the tachyon machine and the translators. As I took them, I pretended to trip over a stuffed bear on the floor. "Oops." When I landed, I accidentally-on-purpose pressed the start button.

Everything went black for a second. Time traveling feels like a sudden drop on a roller coaster. A *steep* drop.

A second later, Jenny was standing—and I was sprawled—outside a giant walled city. It was daytime. And all around us were the sounds of battle.



About 100 yards from the fortress-like city, men were fighting. Swords smashed against metal armor and round, leather shields. Warriors riding on horse-drawn carts hurled spears.

"Get down!" I yelled. A spear clattered nearby. Jenny and I ducked behind a stone wall.

Jenny put her hands on her hips and said in this mean voice, "Give me the tachyon machine, Sean. We're returning home. And then I'm never going to see you or talk to you again."

"Awww, Jenny, chill. It was an accident. Besides, now that you're here, you can study ancient history." I put the tachyon machine in my pocket. "Here's a translator. Let's hang for a while."

Jenny angrily snatched the translator out of my hand. "Enjoy this trip," she said. "You're never going on another one!"

I didn't know where we were (though I could tell from the way the soldiers were dressed it was a long time ago). The battle was being fought on a long flat area. In the distance was the sea. Hundreds of wooden sailing ships were anchored there. It was an awesome sight.

This was pretty neat. Sometimes on these trips, it's almost like watching a movie. But then I stubbed my toe on a shield lying on the ground. It was no movie. I picked up the shield to look at it.

Suddenly, a soldier ran up to me. He swung his sword. I couldn't believe this was happening! At the last second, I put my shield up. But the sword split it in two! I screamed, "Hey, are you nuts?" He raised his sword again. Goodbye world.

Troy Boy

"Hector, lower your weapon!"

The dude who said this wore golden armor. "Spare this brave young warrior," he told the swordsman. "He defends a woman of rare beauty."

"Do you mean me?" asked Jenny in this flirty way.

"Yes. My name is Paris. And you must be Aphrodite, the goddess of love, in disguise."

"No, I'm Jenny Lopez." She was looking at Paris like he was Luke Perry.

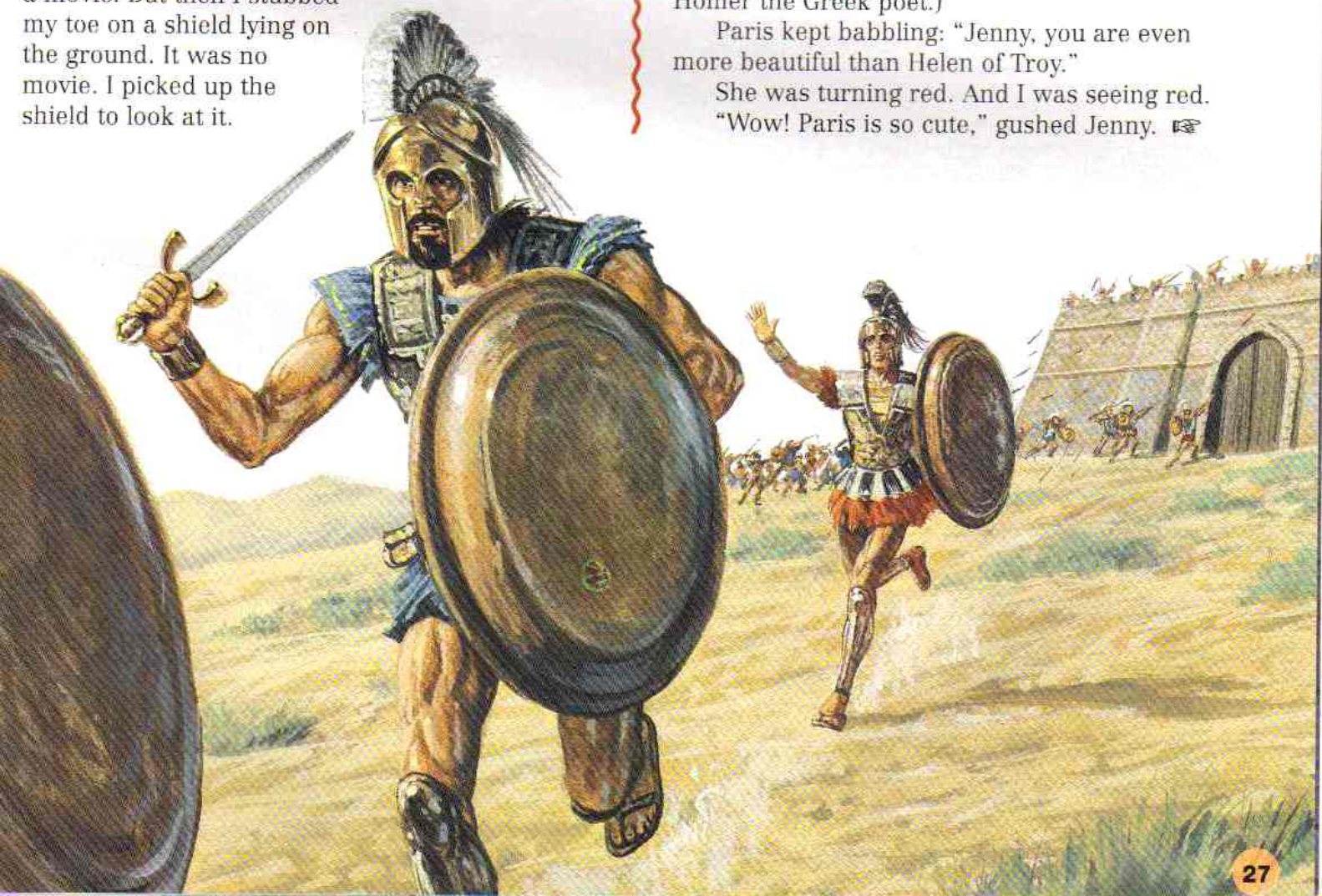
"Ten years ago I stole Helen from the Greeks, and brought her here, to the city of Troy," continued Paris. "And for 10 years the Greeks have fought us to get her back."

The Trojan War! I think I read about it in some book on Greek mythology. It was supposed to have taken place about 3,000 years ago. Homer told the story. (Not Homer Simpson—Homer the Greek poet.)

Paris kept babbling: "Jenny, you are even more beautiful than Helen of Troy."

She was turning red. And I was seeing red.

"Wow! Paris is so cute," gushed Jenny. ☞



Paris held out his hand. "Come with me. You shall be Jenny of Troy!"

Jenny moved to Paris's side.

I couldn't believe she was buying his bogus line. "Jenny, you can't go out with this guy!"

"I'm just trying to learn about ancient history," she grinned.

Paris and Jenny disappeared through a gate into Troy.

I was alone.

I guess I panicked. I started pounding on the door. Then I felt sorry for myself. Not only did Jenny walk off with another guy—but I couldn't go home without her or I'd never see her again. Bummer!

It wasn't long before a bunch of soldiers surrounded me. One of them said, "This mere boy must be a Trojan. Perhaps he's a spy sent to confuse us."

"Let Nestor speak," cried another. An old man with a white beard hobbled over: "Look at his odd clothes. Maybe he is playful Zeus, king of the gods, in human form—here to make mischief among us."

Then some guy named Ulysses put in his two cents. He was a captain, and supposedly a brain: "Slay him to please the gods."

"Yo!" I said in my defense. "I'm here because my girlfriend...well, she isn't exactly my girlfriend...but anyway...I didn't want her to go out with Hercules—"

Agamemnon, their king, cut in. "You know Hercules?"

"Sure, he's an awesome athlete."

I was talking about Hercules Hastings. But the Greeks thought I meant some other Hercules.



Their Hercules was kind of like Arnold Schwarzenegger—only bigger and stronger. They were impressed I was tight with Herc.

But Ulysses said, "I don't trust this boy. Use him for target practice!"

Agamemnon came to my rescue. "Do not harm a friend of Hercules. Leave him be."

I smirked at Ulysses. Which wasn't too smart. He whispered to me, "I'll be watching you, you beardless son of nine-headed Hydra."

I sneered, "Whatever you say bounces off me and sticks to you." That shut him up.

Anyway, the reason the Greeks hadn't been able to beat Troy in 10 years was simple. They couldn't get inside the city's bodacious walls. But I had to try.

While Trojans and Greeks whaled on each other, I tried every gate. All locked.

"Yoo-hoo, Sean!"

I looked up. There was Jenny, waving at me from the top of the wall! Next to her was a smiling Paris. "I'm having a great time," she shouted.

What a nightmare! I had to get Jenny away from that Trojan slimeball.

Feeling rotten, I returned to the Greek camp.

Ulysses was waiting for me. "Coward! You didn't fight the Trojans." He raised his sword.

"There is but one punishment for you." And he wasn't talking about taking away my allowance.

Showing Horse Sense

"By the gods, death will come as a gift," he hissed. Suddenly I got a brainstorm.

"Ulysses, my man, I know how to get inside Troy. Get out of my face and I'll tell you how."

This got his attention. "We'll leave the Trojans a gift," I said. I told him my plan and he smiled.

Inside King Agamemnon's moldy tent, Ulysses described my idea—only he said it was his idea. Agamemnon called Ulysses a genius. Typical. I never get credit for my great ideas.

That night, the Greeks quietly went to work. They built a giant wooden horse. A couple of soldiers and I climbed inside. It was sealed. The

Greeks wheeled it outside Troy. Then they got in their ships and pretended to sail off.

I'll always remember that night inside the horse. It was really stuffy. And since we couldn't talk, it was boring. I got stiff. Everytime someone moved, he bumped into someone else. There was a lot of shoving and pushing in the dark. And the smell—thousands of years before deodorant was invented—wasn't so nice.

An Inside Job

The next morning, the Trojans saw the horse. Then they saw that the Greeks were gone. Some Trojans believed the horse was a gift from Zeus and the gods of Mount Olympus. Others thought the Greeks had left it as a goodbye present.

They knocked on the side of the horse a few times. We were nervous. But they soon wheeled the horse past the doors and into the city.

We waited some more. My stomach growled so loudly, I was afraid the Trojans would hear.

Night fell. We opened a hidden door and silently climbed out of the horse. No one was around. The other guys secretly went to open Troy's gates for the waiting Greeks. I smirked, "Beware of Sean Nolan bearing gifts." Then I went searching for Jenny.

Outside the royal palace an alarm went up. Everyone rushed out to fight the Greeks. I went upstairs. Jenny saw me and said, "Get lost, Sean! Paris is taking me to the festival of Athena tomorrow. It's going to be such a cool date."

Okay, I thought, I'll do this my way. I pretended to trip over Paris's helmet. When I landed, I accidentally-on-purpose hit the start button on the tachyon machine. So long, Paris, you chump.

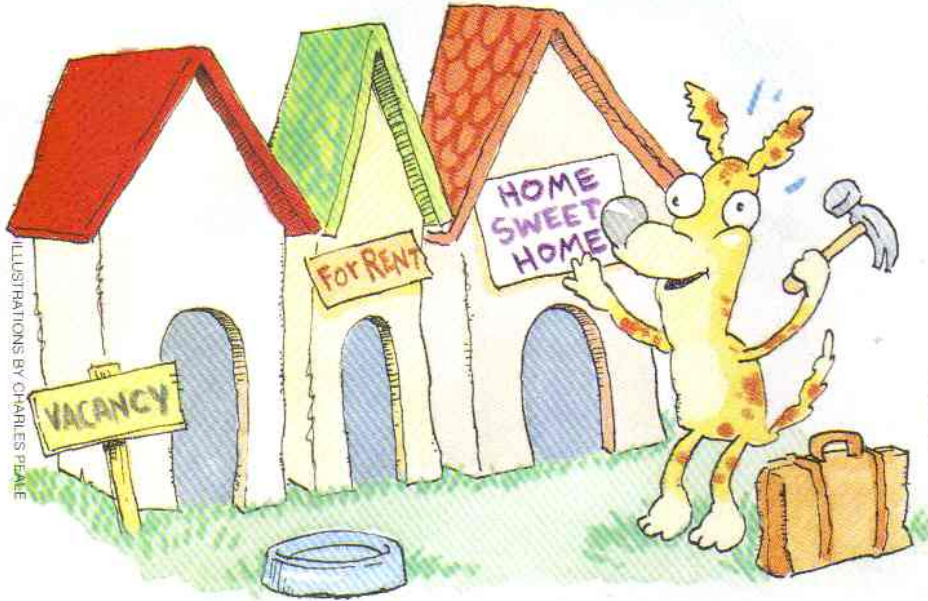
Jenny and I found ourselves back in her room at almost the same moment we had left it. Jenny called me a clumsy idiot. Big deal. She's called me worse. The real problem was, she still had time to go out with Hercules Hastings. But Jenny sighed, "My hair is a mess, my clothes are dirty and I'm tired. I guess I've got to call off my date tonight."

Bingo! ◆



FACT

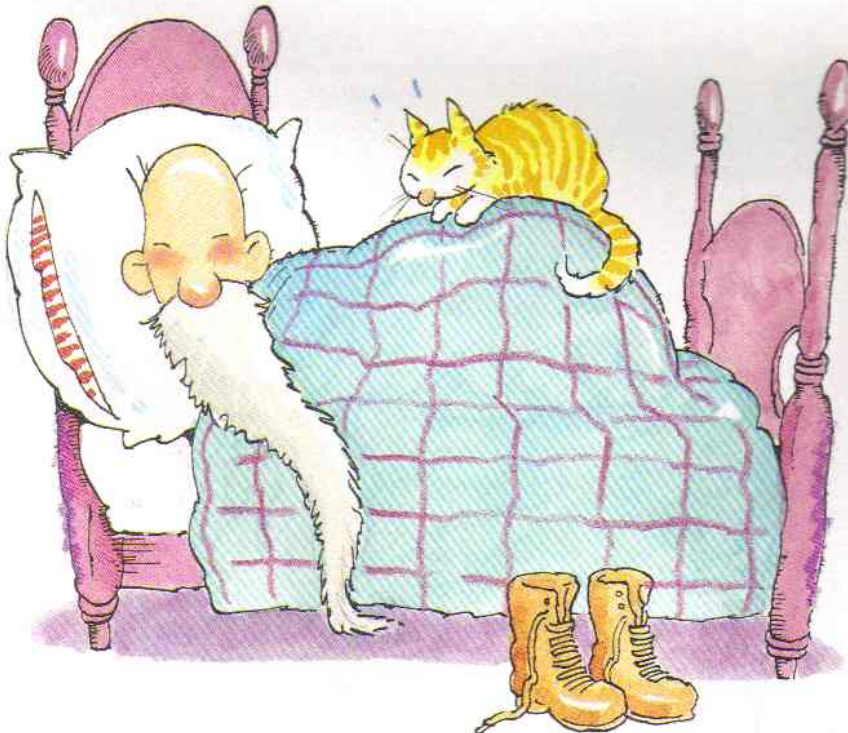
One in every three households in the U.S. owns a dog.



ILLUSTRATIONS BY CHARLES PEALE

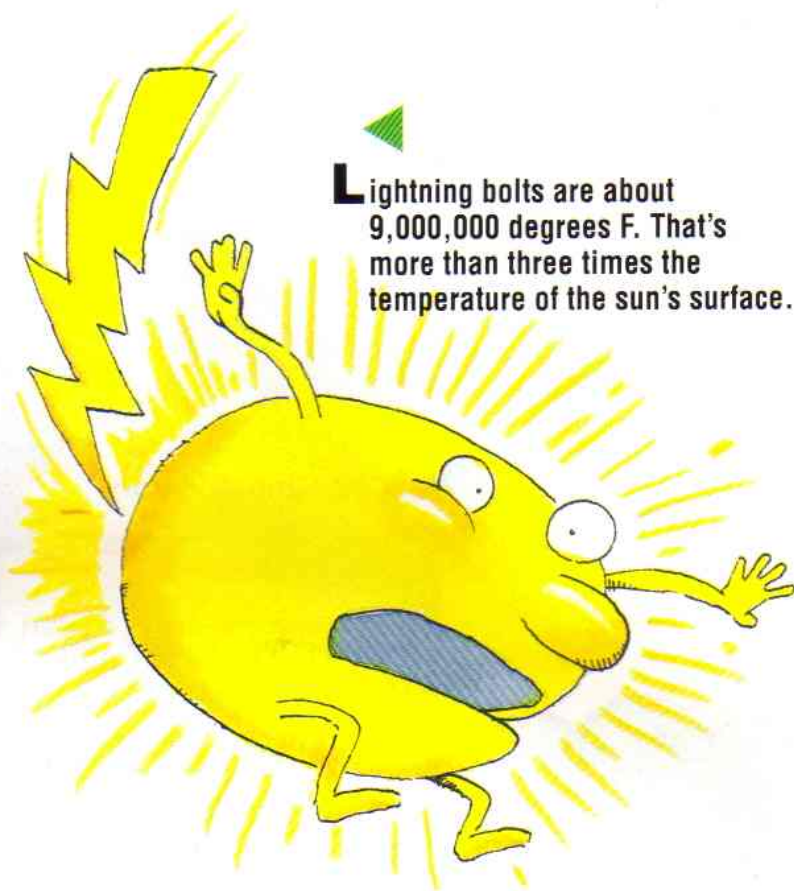


By the time they are 70, most people have slept 220,000 hours.



Yo-yo's were originally used as weapons in the Philippines.

Olds



Lightning bolts are about 9,000,000 degrees F. That's more than three times the temperature of the sun's surface.

Male mosquitoes live for only seven to 10 days.



A summer on Uranus is 21 Earth-years long.



ANY QUESTIONS?

By Christina Wilsdon

**W
H
Y**

DO PEOPLE'S FEET AND HANDS FALL ASLEEP?

A foot or hand that falls asleep feels very weird. First, it's numb and heavy. Then it's painful and tingly. These strange feelings aren't caused by your body snoozing. They're from the squishing of your nerves.

(The fancy name for this feeling is "neuropaxia"!)

Nerve cells send messages back and forth between your brain and your body. They're very delicate. Most big nerves are buried within muscles and near bones. This protects them from injury.

But if you sit on your foot, you press a nerve between your bone and the hard chair. Blood still flows to your foot. But the pressure affects the signals sent by the nerve. When you get off your foot, you release the nerve—and new signals shoot through it. You feel "pins and needles," just as you do when you wham your "funny bone"—the nerve in your elbow.

Almost any part of your body can fall asleep—your arm, the top of your head, your cheek, your feet—even your seat!

Question sent in by Tamar Hiram, New York, NY.



**W
H
Y**

DO ANIMALS' EYES GLOW IN THE DARK?

Animals' eyes don't glow just to scare you and other creatures. This glow—called "eyeshine"—helps them see better at night.

Animals that hunt or roam at night have a layer of reflecting cells in the back of their eyes. This layer is called the *tapetum lucidum*. (That's Latin for "carpet of light.")

Light that enters the eye hits the animal's vision cells first. Then the light strikes the tapetum. The tapetum bounces the light back out of the eye. So light hits the vision cells twice.

Night animals' eyes don't glow in the dark unless a beam of light is shined into them. (The tapetum reflects some of the light out the front of the eyes, making them look like they're glowing.)

Some animals' eyes glow more than others. They glow in different colors, too. Frogs' eyes look green. Cats' eyes glow green-yellow. A swamp full of red eyes means alligators!

Question sent in by Stacie Schimmels, Spokane, WA.

RECYCLING CAUSE POLLUTION?

Yes. To recycle things, you have to run recycling machines and drive trucks to pick up newspapers, bottles and cans. That uses energy and sends exhaust fumes into the air.

But it still takes more energy and causes more pollution to make a new thing than to recycle old things.

Take paper, for example. Loggers cut about 17 trees to make one ton of paper—and we use millions of tons of paper every year. Paper-making destroys forests and spreads polluting chemicals. After it's used, paper is burned or dumped into landfills—more pollution!

Recycling paper saves energy and forests. There are still a few bugs to work out, though—like how to remove old ink without polluting water.

Recycling can sometimes save amazing amounts of energy. For example, it takes 20 times more energy to make new aluminum than it does to recycle it from cans! That's why, when it comes to recycling, a lot of people say, "Can do!"

Question sent in by Rebecca Dixon, Landenberg, PA.

RECYCLING



HOW

DOES A COMPACT DISC PLAYER WORK?

A compact disc player uses lasers, computer chips, mirrors and lenses to read a disc. The disc's surface looks smooth and shiny. But under this surface are tiny pits.

These pits and the track surface around them are both codes. To read the codes on the disc, the player shoots a laser beam through mirrors and lenses at the bottom of the disc.

If the beam hits a pit, no signal is produced. But if it hits a track surface, the beam gives off an electrical signal. A microchip then changes the signals back into the sounds of music.

The laser reads the disc from the center out to the edge. The spiral track it follows is too narrow to see—even though it's a couple of miles long!

Question sent in by Karen Ann Stram, Hill City, MN.

Do you have a question
that no one seems able to answer?
Why not ask us? Write to:
Any Questions? 3-2-1
Contact, P.O. Box 40, Vernon,
NJ 07462

POP ART

**Find the 3-D
Message
in These
Dots**

Somewhere in these dots is a 3-D message. But you don't need special glasses to see it—just your plain eyes!

How the message was made:

The message is a rebus—a sentence made up of letters, words and pictures. A computer made it look three-dimensional. It did it by turning the rebus into columns of random dots. Then the columns were repeated. Each time they were repeated, some dots were moved slightly to one side. When you stare at the dots a certain way, your eyes bring the image back together.

How to see the message:

■ Hold the page about 12 inches in front of your eyes. Stare at the two groups of num-

bers above the dots.

Blur your vision or blink your eyes until you see four groups of numbers. Relax your eyes until the two middle groups come together to form one group. Now you should see the 3 2 1 pop out in 3-D. Keep staring a few seconds, then look down into the dots. You should be able to read the message.

■ If that doesn't work, hold the page up to your face, so your nose touches it. Keep staring at the page. Now, slowly move the page away from your face. Continue to stare at the page as if you were staring through it. In a few seconds, you should be able to read the 3-D message. Don't worry if you can't see it at first. Sometimes it takes a while before the message comes into view. And some people won't be able to see it at all.

Headstart:

The first part of the rebus is a picture of a can. Turn to the Did It page for the rest of the message.

1 2 3 1 2 3



Let's Talk HERSHEY'S CHOCOLATESE

← START HERE

AND FILL IN THE BLANKS.

1.

FIRST YOU
F---D IT.

2.

THEN YOU
---L--- IT.

3.

THEN YOU
---A--- IT.

4.

THEN YOU
S---O--- IT.

5.

THEN YOU
---U--- IT.

6.

THEN YOU
---L--- IT.

7.

THEN YOU
---U--- IT.

8.

THEN YOU
---T--- IT.

9.

THEN YOU
---L---C--- IT.

10.

THEN YOU
---P IT...
---PIT...
---PIT!

NOW YOU'RE TALKING
HERSHEY'S CHOCOLATESE!

And TOMORROW you can do it all OVER AGAIN.

ANSWERS: 1. FIND 2. MILK 3. GLASS 4. SPOON 5. POUR 6. AIM 7. SQUEEZE 8. STIR

9. LICK 10. SIP, SIP, SIP

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MAGIC

MATH TRICKS TO AMAZE YOUR FRIENDS

By Marvin Miller



MAGIC AT YOUR FINGERTIPS

Tell a friend that you can guess the color of playing cards just by feeling them with your fingertips.

- Show your friend a pile of five red cards and a pile of five black cards. Put one pile on a table face up. Then place the other pile—face down—on top of the first pile.
- Have your friend give the pile of 10 cards a good shuffle so the colors are mixed together. Now, the backs and fronts of the cards will show.
- Place the cards behind your back. Then, secretly count off the top five cards, flip them over and hold the flipped pile in front of you. In your other hand, show the other pile. (Don't flip them!)
- Tell your friend that you have turned up as many face-up red cards in one hand as face-up black cards in the other. Spread out both packs and see!



THE ODDEST COINS

Bet your friend that he or she can't put 10 coins into three glasses so that each glass has an odd number of coins in it. When your friend gives up, show how it's done!
Solution on the Did It Page.



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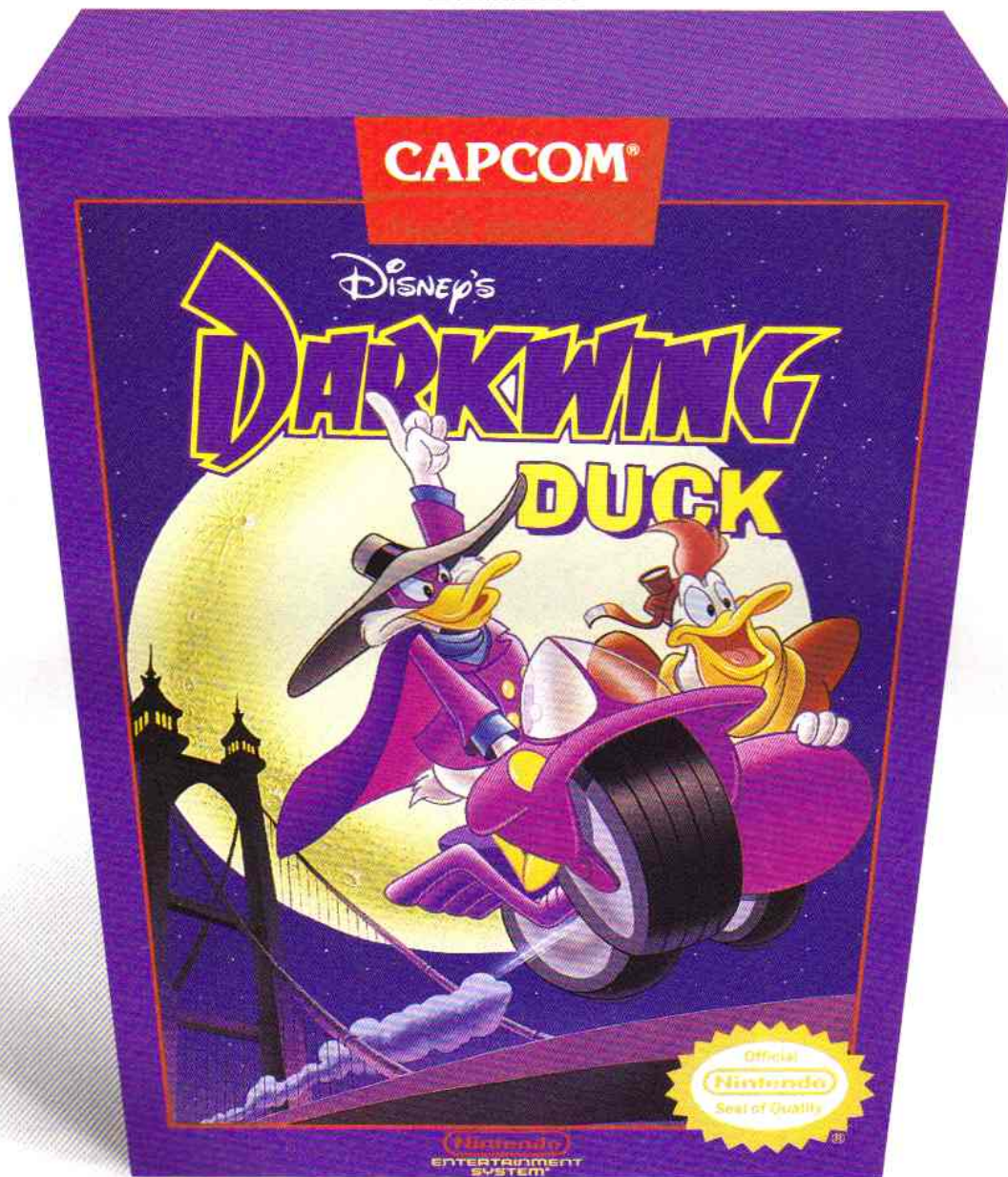
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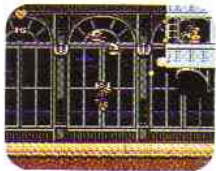
STORY: LISA GINNS
ART: KERRY GAMMILL & KEITH WILSON



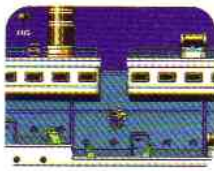
CONTINUED ON PAGE 40.



Only one duck can quack this case.



*Watch out for
Steelbeak's flying eggs,
or you'll be fried forever.*



*On Steelbeak's floating
crime fortress, the
danger comes in waves.*



*Better move fast, cause
these turtles are anything
but slow.*

F.O.W.L. has turned St. Canard into one big crimefest. Darkwing Duck's mission: cook their goose for good. Easy? Not! He must first live through 7 dangerous levels where arch enemies like Steelbeak, Quackerjack and Mega Volt await. He can't do it without you. So stop flapping around and get on the case today.

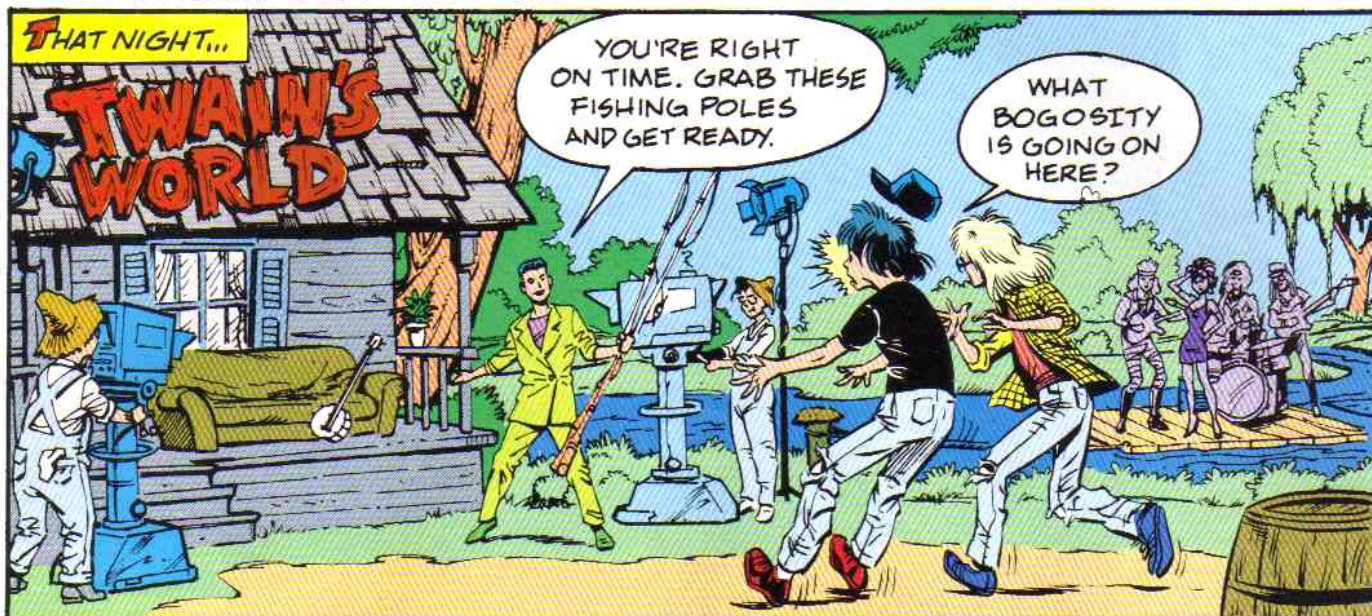
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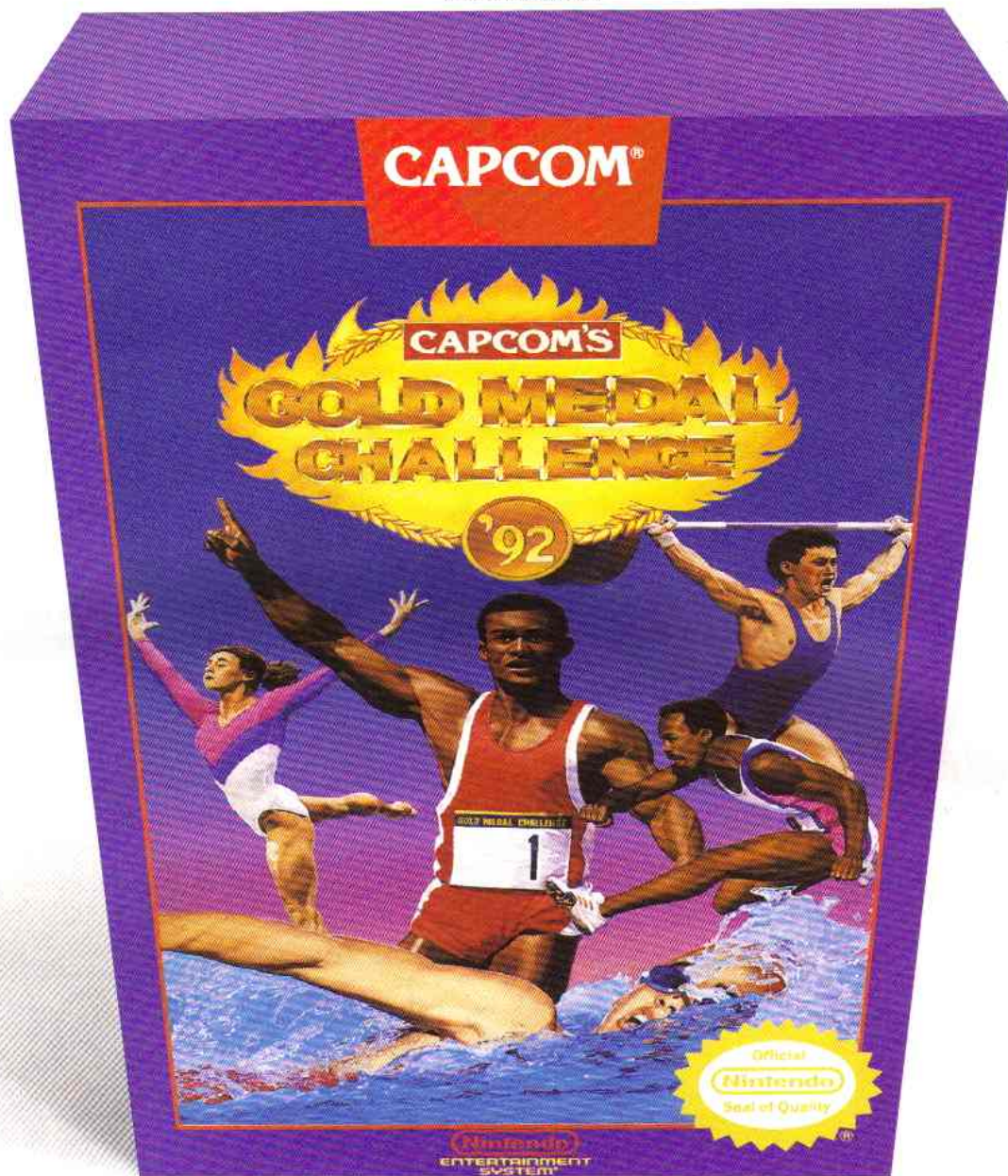
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CONTINUED FROM PAGE 38.





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Maybe you'll win the gold by throwing the javelin further than anyone in history.



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EXTRA!

By Beth Chayet

THE JOKE'S ON US

What do you get when two dinosaurs crash into each other at 60 mph?

Tyrannosaurus wrecks!

Yuk, yuk! How's that for an old joke? You've read about how laughter's good for people. Now make *us* laugh. Enter our joke contest.

On a postcard, send us your favorite dinosaur joke (only one please). If you don't have a dinosaur joke, make one up. Mail it to:

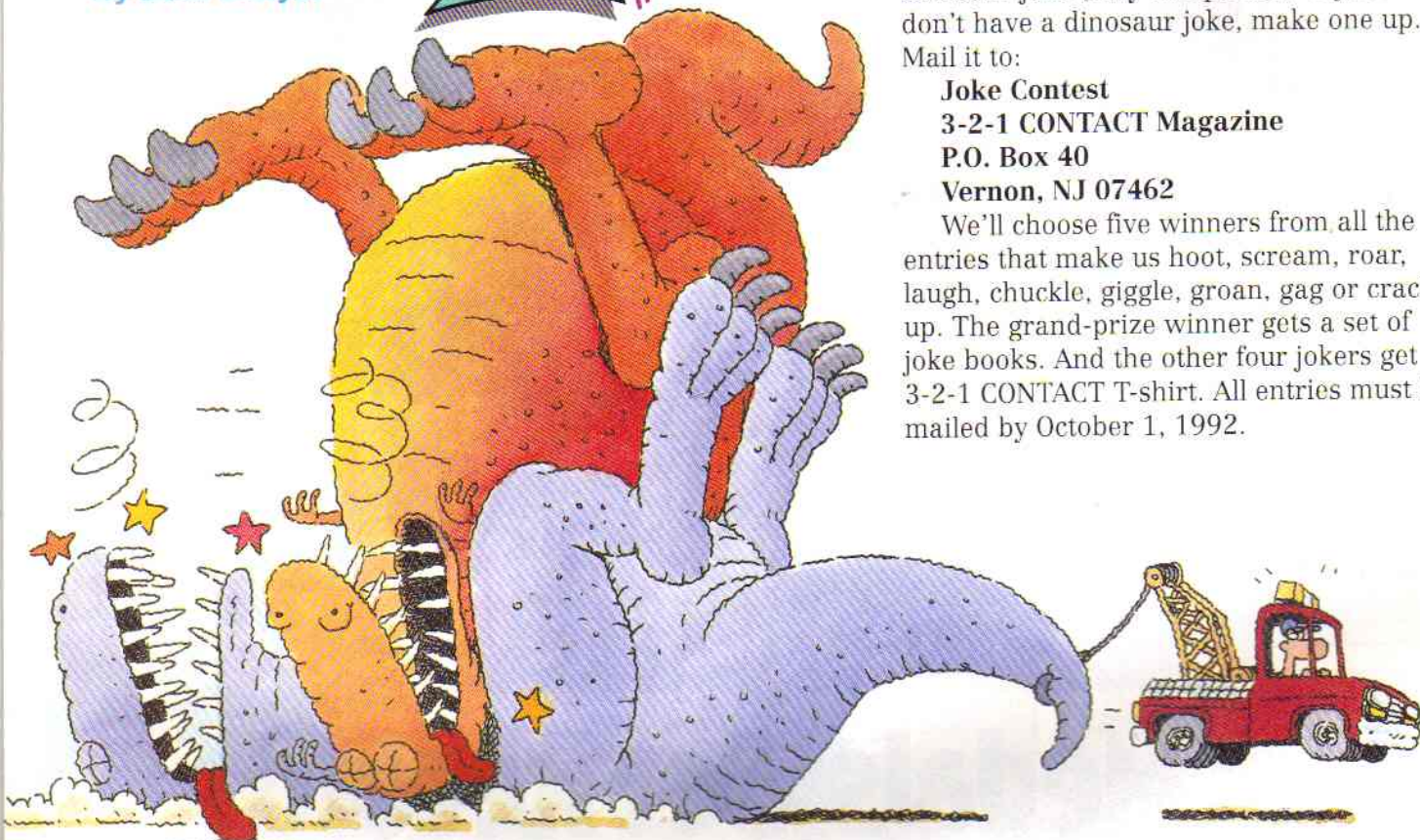
Joke Contest

3-2-1 CONTACT Magazine

P.O. Box 40

Vernon, NJ 07462

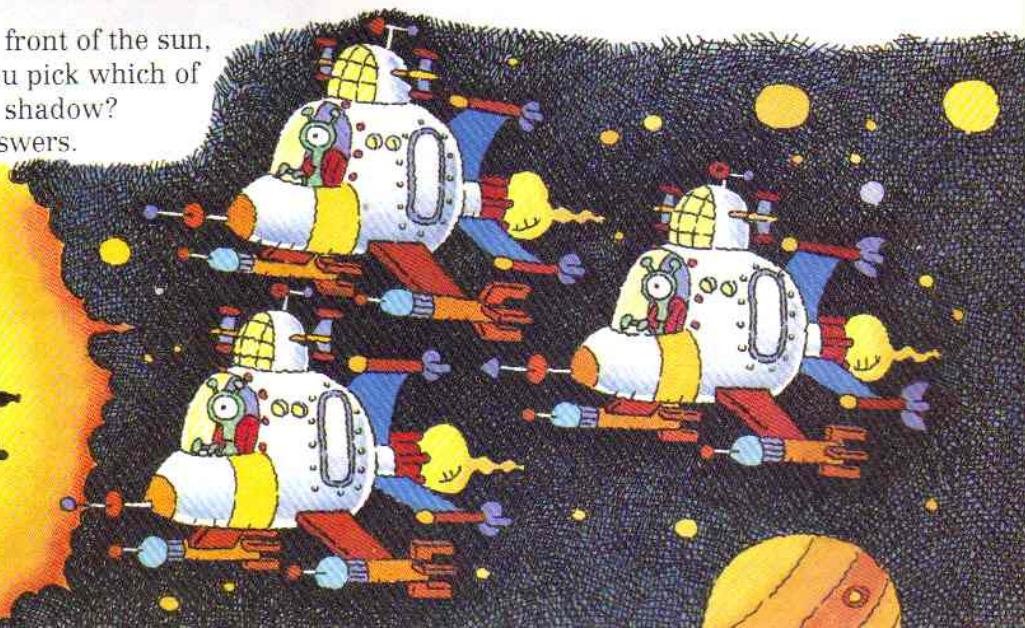
We'll choose five winners from all the entries that make us hoot, scream, roar, laugh, chuckle, giggle, groan, gag or crack up. The grand-prize winner gets a set of joke books. And the other four jokers get a 3-2-1 CONTACT T-shirt. All entries must be mailed by October 1, 1992.



BLAST OFF!

As this spacecraft passes in front of the sun, you can see its shadow. Can you pick which of the three spaceships made the shadow?

Fly to the Did It page for the answers.



ILLUSTRATIONS BY RICARD WEISS

PLANT OF THE APES

This monkey went ape and ate too many bananas. Now he has a bellyache. Can you help get him to the plant that will help him feel better?

Start on the footprint to enter the rain forest. Move two spaces to the right. Whenever you land on a new space, read the numbered footprint and move that many spaces in the footprint's direction. If there are two directions, choose one. Beware! The wrong path will lead you back to the beginning of the forest.

Answer on the Did It page.



Did It

DWAYNE'S WHIRL

Everything's okay! Crashlanda started floating away at 9:30 (the boys were right on time). She's got to go on in 30 minutes (at 10:00) and she's in satellite range for 45 minutes—she's got 15 minutes to spare.

THE ODDEST COINS

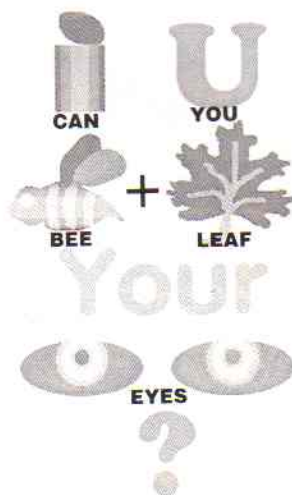
Put three coins in the first glass, five coins in the second and two coins in the third glass. Then, pick up the second glass and place it inside the third. Now, each glass contains an odd number of coins!

BLAST OFF!



POP ART

The 3-D message is: Can you believe your eyes?



PLANT OF THE APES



NEXT MONTH

There are no tricks but lots of treats for you in our October issue of CONTACT:

CREEPY CRAWLERS

The real monsters aren't on your doorstep this Halloween. They're in your house—under your bed, in your kitchen, even on your face! These scary-looking creatures are microscopic insects and other critters. Here's a close-up look at your horrible—but harmless—housemates.

MOVIE MAGIC

How do you turn a car into a tiger? Or a man into a woman? Easy. Use a computer. Computers are creating amazing special effects. And they're showing up more and more in movies, music videos and TV commercials. One day, these life-like creations may even replace human actors!

WINGING IT

Take a bird's-eye view of a day in the zoo. See why being a zoo keeper at New York City's Bronx Zoo definitely isn't for the birds! Along the way, you'll find out why it isn't a good idea to turn your back on a baby emu—and lots of other neat facts.

PLUS

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JR. GOLF SET
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Gilbert Soto
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